- ProjectWorX

smar
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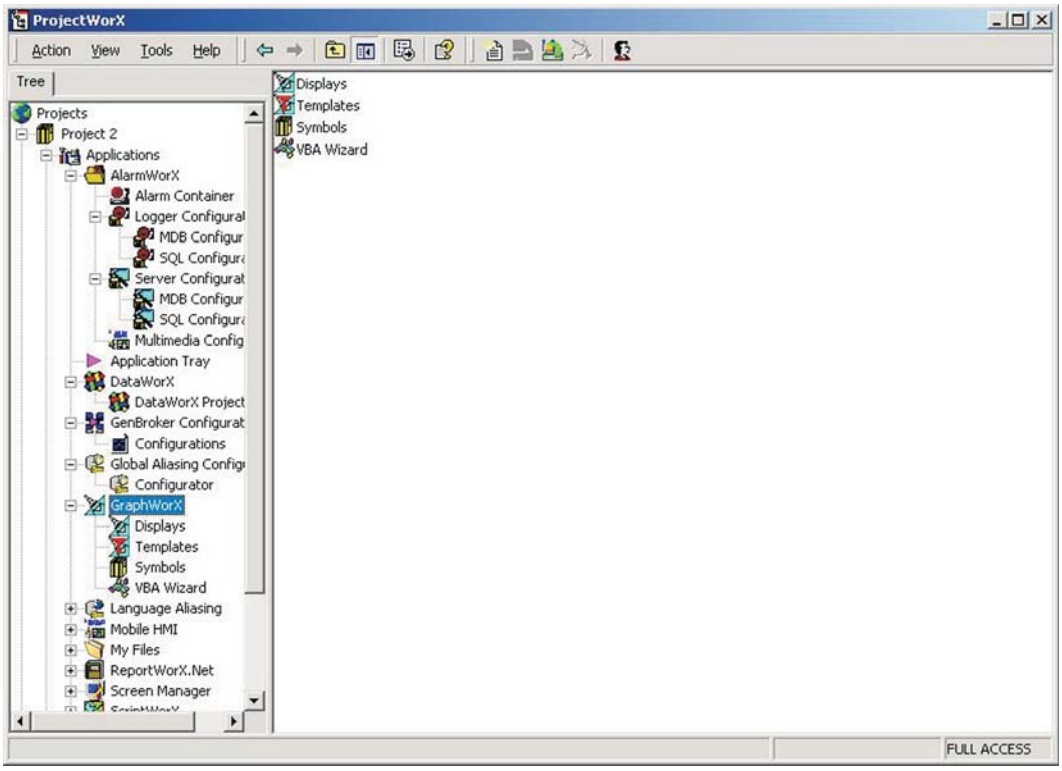
ProjectWorX



MAY / 06
ProjectWorX
VERSION 8

FOUNDATION

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Chapter 1

INTRODUCTION

Overview of ProjectWorX

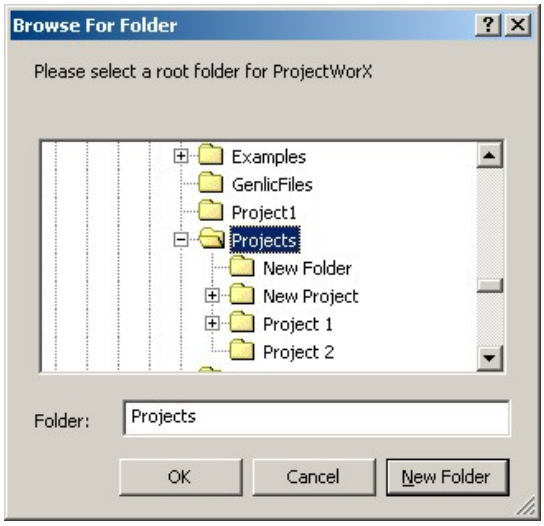
ProcessView contains numerous applications with multiple components, requiring a well-trained user in order to successfully create, integrate, deploy, and manage projects. Each of these components requires complex setup of many different types of configuration files, databases, and OPC servers, as well as runtime and security settings. To simplify the management and deployment of the broad spectrum of ProcessView applications, Smar has introduced ProjectWorX, a sort of "super configurator" that integrates all ProcessView applications into a single, easy-to-manage format. The ProjectWorX user interface is basically a container embedded in the Microsoft Management Console (MMC). The ProjectWorX console conveniently consolidates all of your ProcessView files in one easily accessible location, enabling you to:

- Organize all ProcessView application files into separate projects.
- Create new ProcessView application files and OPC server configurations.
- Import application files into projects.
- Start and stop ProcessView applications.
- Pack project files into a single, compressed file, and unpack project files for easy deployment to multiple computers.
- Activate entire projects into runtime mode.
- Control the layout of windows using the Screen Manager.
- Configure security settings to password-protect projects.
- Back up project files to Microsoft Visual SourceSafe.
- Search for and replace machine names and OPC tags throughout all project files using a global find/replace utility.
- Publish projects to the Web.
- Control and monitor runtime functions for all applications using GenTray.
- Launch ProcessView system tools.
- Generate comprehensive reports for all files and projects.
- Import and manage third-party applications.

Starting ProjectWorX

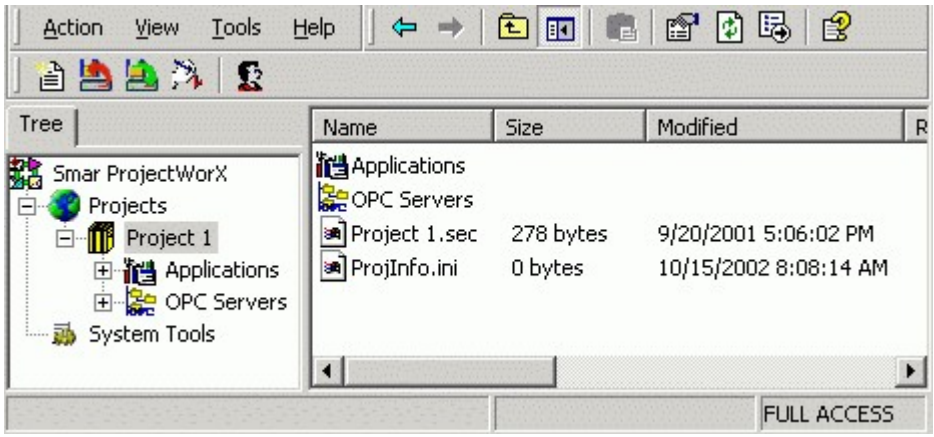
To launch ProjectWorX:

1. From the Windows Start menu, select **Programs > Smar ProcessView > ProjectWorX**.
2. The first time you open ProjectWorX, you are asked to select a folder in which the ProjectWorX database will be stored, as shown in the figure below. Browse for a projects folder, and then click **OK.**



Main Projects Folder Selection

3. The **ProjectWorX Projects** console opens in the Microsoft Management Console, as shown in the figure below. This is the main ProjectWorX console that allows you manage your ProcessView projects. This is a split window with a tree control view in the left-hand pane and a configuration view in the right-hand pane.

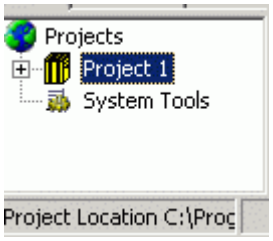


ProjectWorX Console

ProjectWorX Snap-ins and Tree Control

Snap-ins are the basic components of the Microsoft Management Console. Snap-ins always reside in a console; they do not run by themselves. The ProjectWorX portion of the console contains snap-ins that allow you to manage and monitor your ProcessView applications. The tree control (left-hand pane) of the ProjectWorX console, shown in the figure below, provides management tools that help you organize and monitor your ProcessView applications into projects. The tree control contains the following snap-ins:

- **Projects:** Manages projects and files for most ProcessView applications.
- **System Tools:** Includes all the functionality available in the ProcessView tools, such as Dr DCOM, License Monitor, Screen Manager, and the Security Configurator.



Tree Control of ProjectWorX Console

Toolbars

The ProjectWorX console contains two different toolbars: the standard Microsoft Management Console (MMC) toolbar and the ProjectWorX **Snap-in** toolbar. For more information on menu command functions, please see the **Menus** section below.

MMC Toolbar

The **MMC** toolbar, shown in the figure below, contains the following commands (from left to right):

MMC Toolbar

- **Back:** Moves back to the previous level in the tree view.
- **Forward:** Moves forward to the next level in the tree view.
- **Up One Level:** Moves up one level in the tree view.
- **Show/Hide Console Tree:** Displays/hides the tree control.
- **Cut/Paste:** Cuts/pastes the currently selected item.
- **Copy:** Copies the currently selected item to the clipboard.
- **Delete:** Deletes the currently selected item.
- **Export List:** Exports the columns in the MMC console to a text log file. The text file contains the column headers and lists the items in each column.
- **Large Icons:** Displays items as large icons.
- **Small Icons:** Displays items as small icons.
- **List:** Displays items as a list.
- **Details:** Displays items as a list with detailed information about the items.
- **Help:** Launches the online Help documentation.

Snap-in Toolbar

The ProjectWorX **Snap-in** toolbar (not displayed in Windows XP or later), shown in the figure below, contains the following commands (from left to right):

Snap-in Toolbar

- **New Project:** Creates a new project under the **Projects** tree of the ProjectWorX console.
- **Pack Project:** Packs the selected project (with all included application files) into a single compressed file.
- **Unpack Project:** Unpacks a packed project and imports the project into the ProjectWorX console.
- **Find/Replace:** Launches the global find/replace utility, allowing you to search for and replace machine names and OPC tags throughout an entire project.
- **Security Login:** Launches the Security Login Utility, which prompts for the user name and password to log into the Security Server.

Menus

The menu bar of the ProjectWorX console contains the following menus:

- **Action** menu
- **View** menu
- **Tools** menu
- **Help** menu

NOTE
The **Tools** menu and the **Help** menu are completely provided by the ProjectWorX snap-in. The **Action** menu contains both standard MMC commands as well as commands that are specific to ProjectWorX.

Action Menu

The **Action** menu lists the action commands available for each item and subitem in the ProjectWorX console. The **Action** menu commands vary depending on which item is selected. You can also access **Action** menu commands for each item by right-clicking the item and selecting actions from the pop-up (context) menus.

MMC Actions

The **Action** menu commands for the MMC are listed in the table below. For additional information about these commands, please see the MMC Help documentation.

MMC Action Menu Commands

COMMAND	FUNCTION
New Window From Here	Opens a new window from the selected root item in the tree control.
Rename	Renames the selected item.
Export List	Exports the columns in the MMC console to a text log file. The text file contains the column headers and lists the items in each column.
Refresh	Refreshes the view in the right-hand pane.
Delete	Deletes the selected item.
Help	Launches the online Help documentation.

Project Actions

The **Action** menu commands for the **Projects** tree are listed in the table below.

NOTE
You can also access **Action** menu commands by right-clicking items in the **Projects** tree.

Project Action Menu Commands

COMMAND	FUNCTION
New Project	Creates a new project under the Projects tree of the ProjectWorX console.
Unpack Project	Unpacks a packed project and imports the project into the ProjectWorX console.
Pack Project	Packs an entire project (with all included application files) into a single compressed file.
Activation	Activates the selected project.
Explore	Displays the current project directory in the Windows Explorer view.
Global Find/Replace	Searches for and replaces machine names and OPC tags in all the project files.
New Project From SourceSafe	Creates a new project from an existing project in Microsoft Visual SourceSafe.
Add File to Project	Imports an existing file into the project.
Generate Report	Creates a comprehensive report for all files and applications in the project.
Exit ProjectWorX	Closes the ProjectWorX console.

Application-Specific Actions

Each ProcessView application (e.g. GraphWorX, AlarmWorX, etc.) within a project contains application-specific action menus for adding and creating project files. Please see **Chapter 3** for information about managing application files.

View Menu

The **View** menu commands are listed in the table below.

View Menu Commands

COMMAND	FUNCTION
Choose Columns	Hides/displays columns in a detailed list. **Note:** This command is only available when **Detail** is also selected on the **View** menu.
Large Icons	Displays items as large icons.
Small Icons	Displays items as small icons.

COMMAND	FUNCTION
List	Displays items in a list.
Detail	Displays items in a list along with detailed information about the configuration of each item.

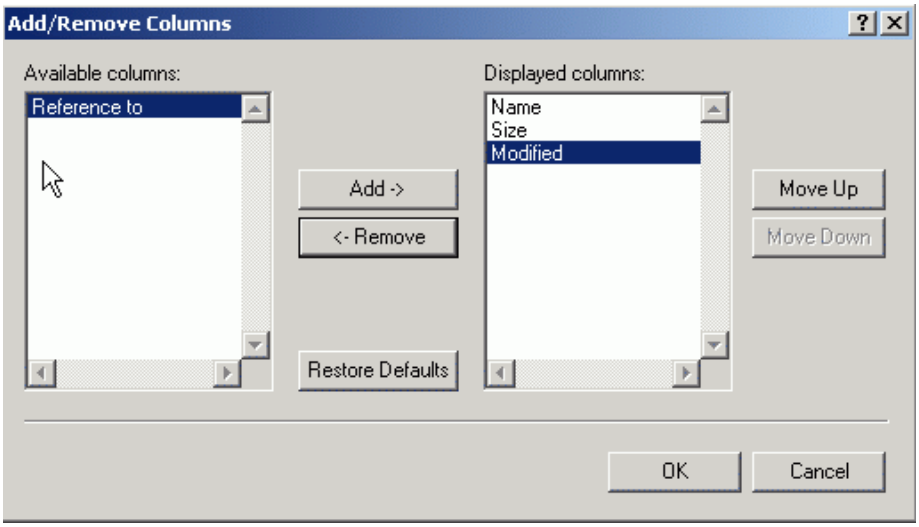
Hiding and Displaying Detail Columns

Selecting **Detail** from the **View** menu displays the items in the selected folder along with detailed information about the configuration of each item. In the figure below, for example, the items in the **My Project** folder in the tree control are listed in the right-hand pane of the console by **Name,** file **Size,** and the date the files were **Modified.**

Selecting **Add/Remove Columns** from the **View** menu opens the **Add/Remove Columns** dialog box, as shown in the figure below. The column names listed in the **Displayed Columns** list (e.g. Name, Size, and Modified) are currently shown in the details view. The column name listed in the **Hidden Columns** list (Reference to) is not shown in the details view. Click the **Add** and **Remove** buttons to move column names back and forth between the **Displayed columns** list and **Hidden columns** list.

To hide a column, in the **Displayed columns** list click the column you want to hide, and then click **Remove**. To display a column, in the **Hidden columns** list click the column you want to display, and then click **Add**. To undo a move, click the **Reset** button.

NOTE
Column names may vary per items in the tree control. For additional information, please see the MMC Help documentation.



Selecting Which Columns To Display in the Details View

Tools Menu

The **Tools** menu commands are listed in the table below.

Tools Menu Commands

COMMAND	FUNCTION
Put [Active Project] in Runtime	Enters the currently active project into runtime.
Shut Down [Active Project]	Stops the currently active project. (**Note:** This command is available in runtime mode only.)
Machine Startup Configuration	Configures the project startup settings for the current computer.
Publish Wizard	Launches the Web Publishing Utility.
Login to SourceSafe	Opens the Microsoft Visual SourceSafe login screen.
Application Preferences	Opens the ProjectWorX Application Preferences dialog

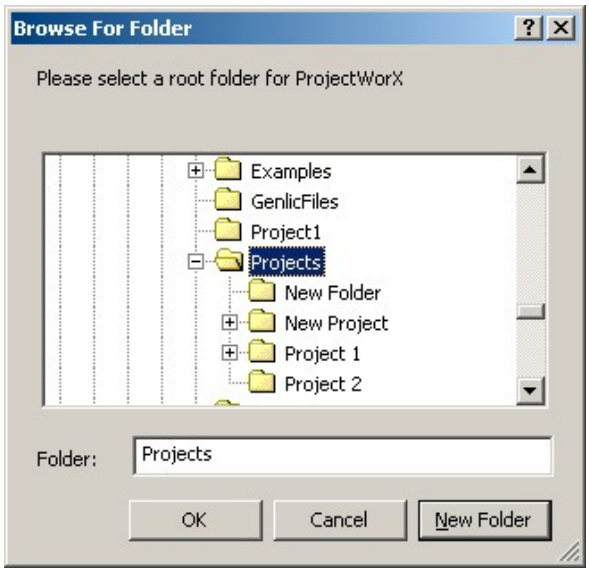
COMMAND	FUNCTION
	box, which specifies settings for files and source control.
Project Properties	Opens the properties for the selected project. Displays information about the general properties, project files, and security settings for each project.
Security Login	Launches the ProcessView Security Login Utility.
Compact Database	Automatically compacts the ProjectWorX database.
Change Database Location	Changes the folder in which the ProjectWorX database is stored.

Compacting the ProjectWorX Database

The ProjectWorX console data are stored in a Microsoft Access database file. ProjectWorX includes a database compacting feature that minimizes the size of this file. To minimize the size of this database, select **Compact Database** from the **Tools** menu.

Changing the Database Location

You can change the folder in which the ProjectWorX database is stored at any time by selecting Change Database Location from the Tools menu, as shown in the figure below. Browse for a projects folder, and then click OK.



Main Projects Folder Selection

Help Menu

The **Help** menu commands are listed in the table below.

Help Menu Commands

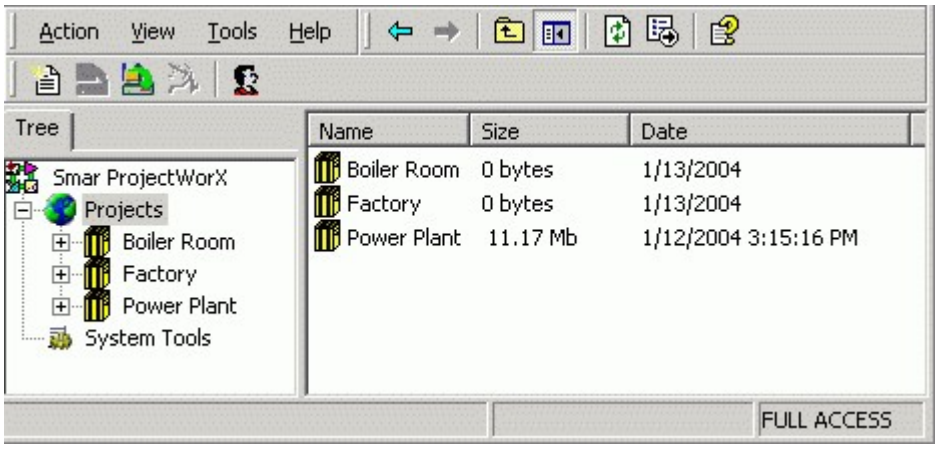
COMMAND	SHORTCUT KEY	FUNCTION
Help Topics	F1	Launches the online Help documentation.
About Application		Launches the **About Box,** which contains information about the product version number, copyright, and available disk space. It also contains information about how to contact the company.

Chapter 2

USING THE PROJECTS CONSOLE

Project Management

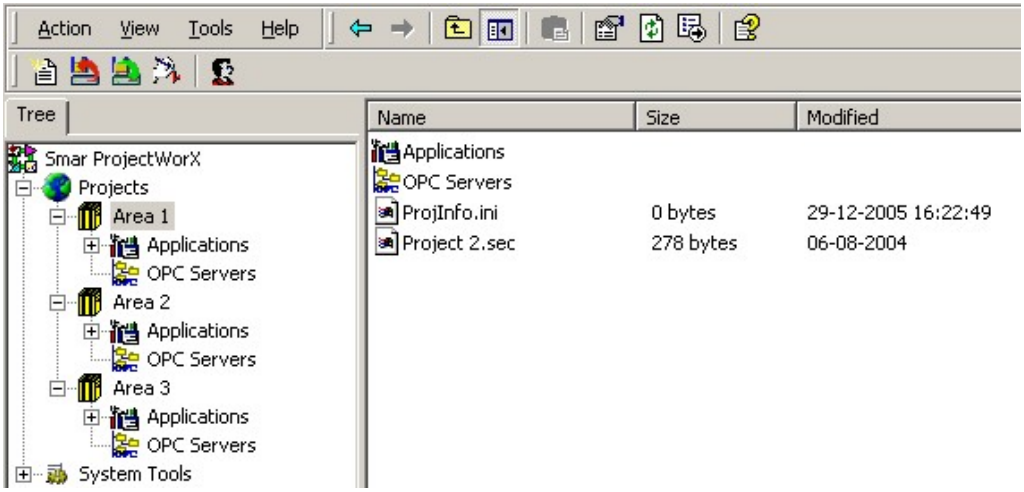
The **Projects** tree in the ProjectWorX console tree control (left-hand pane) is where you manage all of your ProcessView project files. Each time you add a new project to the ProjectWorX console, a folder is created for that project in the "Bin" directory. From this single location in the ProjectWorX console you can conveniently add existing ProcessView application files, create and launch new files, and check files into Microsoft Visual SourceSafe. As shown in the figure below, you can create multiple projects (e.g. Boiler Room, Power Plant, and Factory).



Projects Snap-in in ProjectWorX Console

Organization of Project Folders

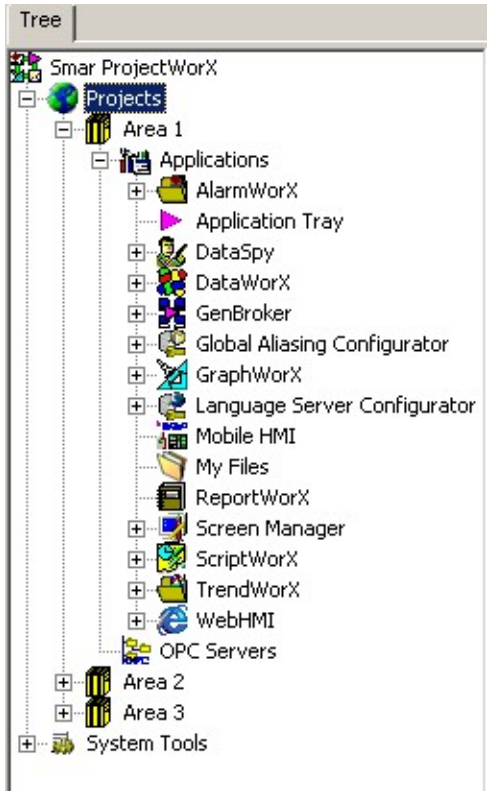
The top-level tree for each project contains two primary subtrees: **Applications** and **OPC Servers,** as shown in the figure below. Each project also contains a "ProjInfo.ini" file, which an initialization file that contains information about the project, as well as a .sec file, which is the Security Server configuration file for the project. For more information about project security, please see the **Enabling Project Password Protection** section below.



Main Projects Tree Control and Files

Application Files

The **Applications** tree for each project contains all ProcessView client applications and components, including GraphWorX, AlarmWorX, TrendWorX, DataWorX, ScriptWorX, MobileHMI, Screen Manager, GenBroker, and ReportWorX, as shown in the figure below. Each of these applications has several additional modules or components (e.g. AlarmWorX Container, Logger Configurator, Server Configurator, and Multimedia Configurator).

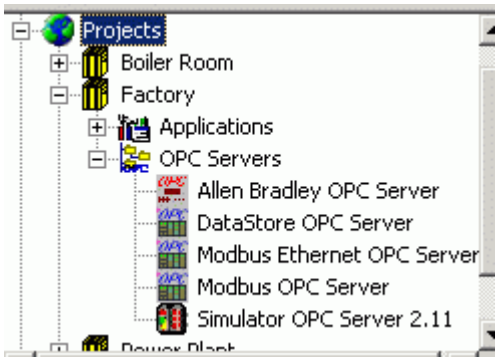


Project Applications Tree

OPC Server Configurations

The **OPC Servers** tree for each project, shown in the figure below, allows you to create and manage OPC server configurations. Each time you create a new OPC server configuration inside a project in the **OPC Servers** tree, the new file is saved to the project folder in the "Bin" directory. If you add an existing configuration file, you have the option of copying the file to the project folder or running the file from its current location.

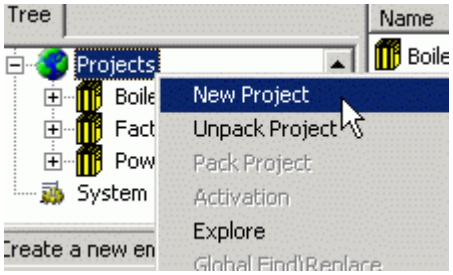
NOTE
ProjectWorX currently supports configuration for the Simulator OPC Server only, which is installed with ProcessView. All other OPC servers (e.g. DataStore OPC Server, etc.) must be installed before you can configure them through ProjectWorX.



Project OPC Servers

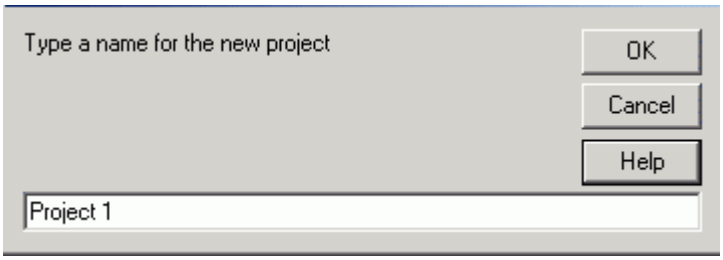
Creating a New Project

To create a new project in the ProjectWorX console:
1. Right-click the **Projects** folder in the tree control and select **New Project** from the pop-up menu, as shown in the figure below.



Creating a New Project

2. Type a name for the new project, as shown in the figure below, and then click **OK.** The new project appears under the **Projects** folder.

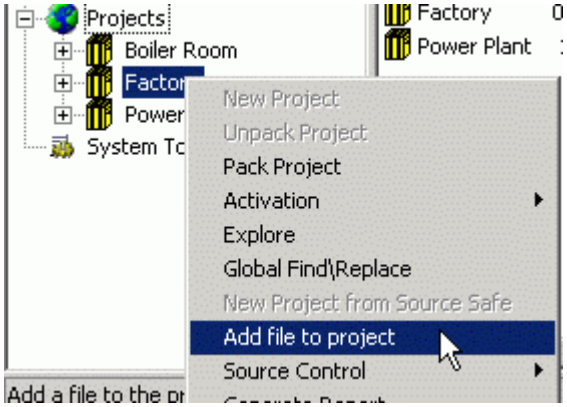


Naming the New Project

Importing Files Into a Project

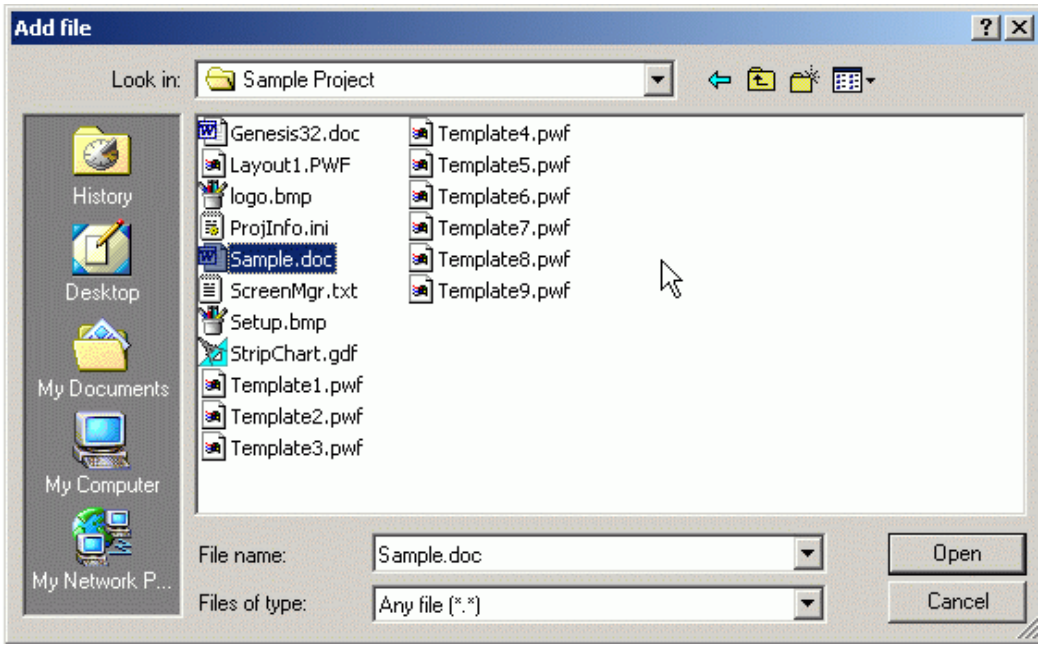
ProjectWorX allows you to import files (of any type) into projects. You can import single files or multiple files at once.

To add a file to a project in the ProjectWorX console:
1. Right-click the project and select **Add File to Project** from the pop-up menu, as shown in the figure below.



Importing a File Into a Project

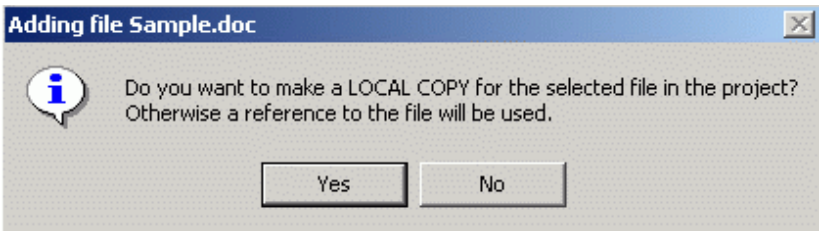
2. In the **Add file** dialog box, choose a directory and a file to import, as shown in the figure below. Click **Open.**



Choosing a File To Add to the Project

3. When you import a file into a project, you can copy the file to the local project directory instead of running the file from its current location. To copy the file to the project folder, click **Yes** in the message box shown in the figure below.

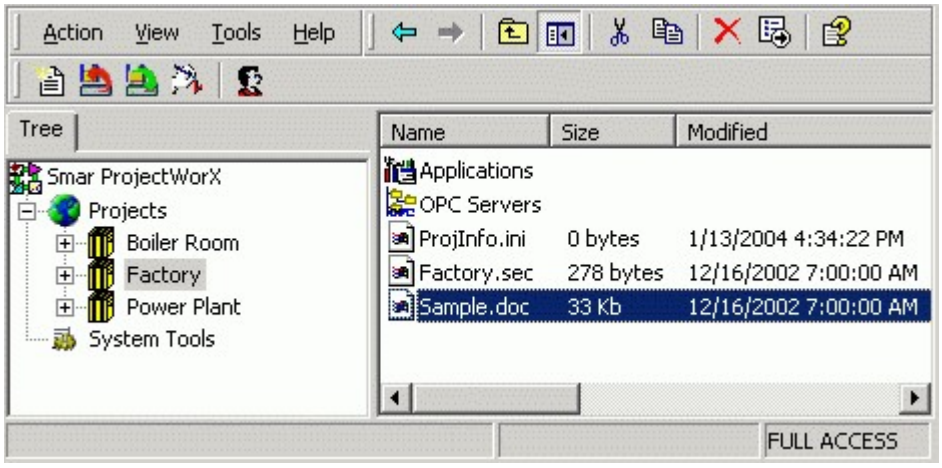
NOTE
If you import a file and choose not to copy the file to the project folder, ProjectWorX runs the file from its current location, and the file's directory path is indicated in the **Reference to** column the right-hand pane of the ProjectWorX console.



Copying the File Into the Project Folder

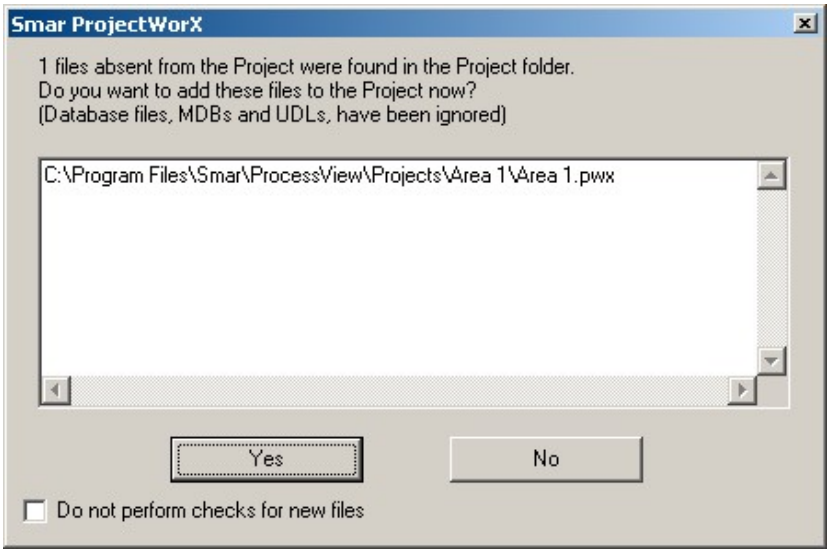
4. The file is added to the project tree and is displayed in the right-hand pane of the ProjectWorX console, as shown in the figure below. Files added to the project have four properties:

- File name.
- File size.
- Date of the last modification.
- Reference to the directory where the file is located (if the file does not reside in the project folder).



Files Imported Into Project

NOTE
If you manually a copy file to a project folder in Windows Explorer, the next time you open that project in the ProjectWorX console ProjectWorX will detect the file and ask you whether to import the file into the project, as shown in the figure below. If you click **Yes,** the file is added to the project tree and is displayed in the right-hand pane of the ProjectWorX console. If you click **No,** the file remains in the project folder but is not imported into to the project and is not displayed in the ProjectWorX console. However, this does not apply to unpacking_log.txt, packing_log.txt and all .mdb and .udl files.



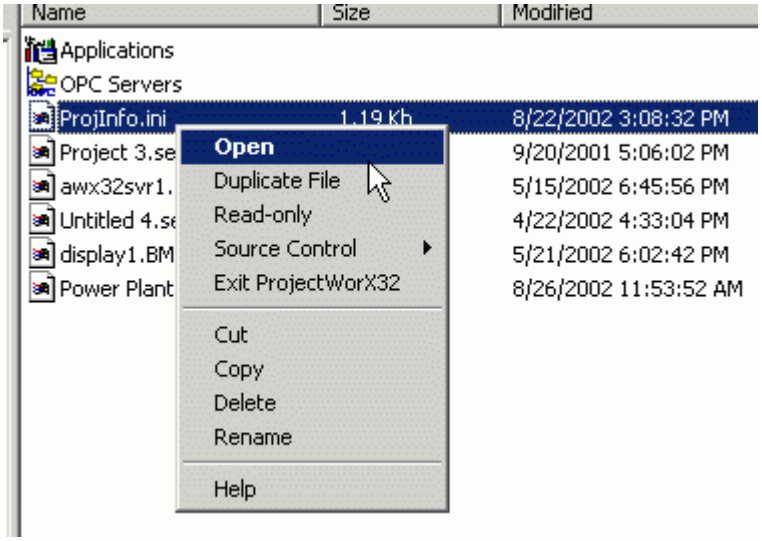
Adding Copied Files to Project

Managing Project Files

All the files in a project can be handled through a pop-up menu available by right-clicking on the file name, as shown in the figure below. The commands available for each file depend on the file type. Generic files can be opened, duplicated, renamed, deleted, etc., while the Packing Log can only be opened and deleted. Drag-and-drop and cut-and-paste functions in the ProjectWorX console are similar to those in Windows Explorer, but you can paste and drop files only between trees of the same type. For example, a GraphWorX display file from the GraphWorX tree cannot be copied to the AlarmWorX tree.

You can also make the file **Read-only** so that it cannot be modified. An additional **Add to Source Control** option allows you to check files into Microsoft Visual SourceSafe. For more information about the Source Control option, please see **Chapter 5.**

NOTE
You can select a group of files for cut/copy/paste/delete. Additionally, files that can be published to HTML can also be multi-selected and have the Web Publisher run on all of them. "Group" SourceSafe actions can also be performed on multiple selections that support SourceSafe.

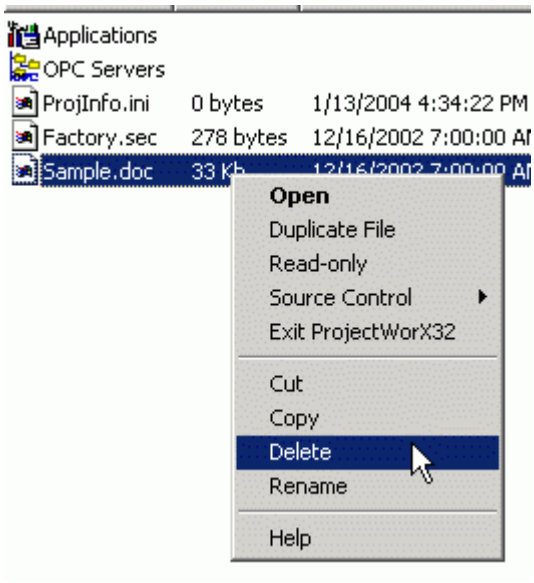


Context Menu for a Generic Project File

Deleting Project Files

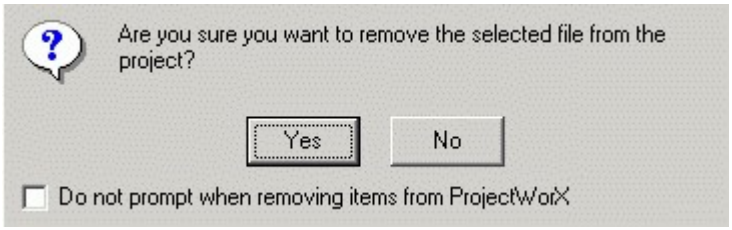
To delete a project file from the ProjectWorX console:

1. Right-click the file and select **Delete** from the pop-up menu, as shown in the figure below.



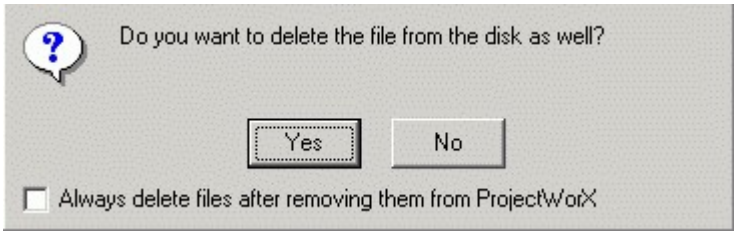
Deleting a Project File

2. A message box appears asking you whether to delete the file, as shown in the figure below. Click **Yes** to delete the file.



Confirming File Deletion

3. A second message box appears asking you whether you want to delete the file from the disk, as shown in the figure below. If you click **Yes,** the file is deleted entirely from the project folder. If you click **No,** the folder is hidden from the ProjectWorX console but remains inside the project folder.

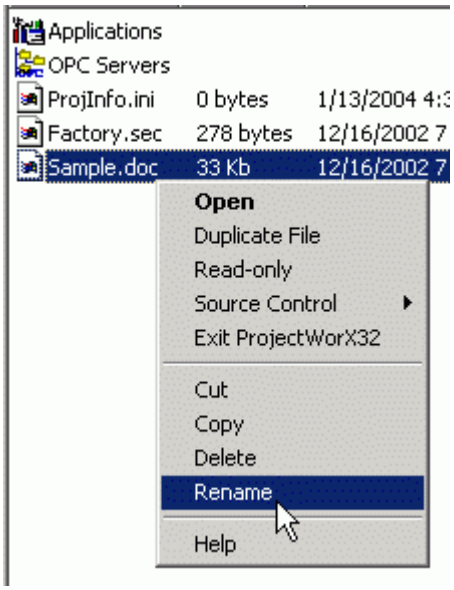


Confirming Deletion of File From Project Folder

NOTE
Deleting a Microsoft SQL Server database configuration file from a project (e.g. for MobileHMI and AlarmWorX Multimedia) will delete it only from the project, not from SQL Server. (The .udl file will not be deleted as well.)

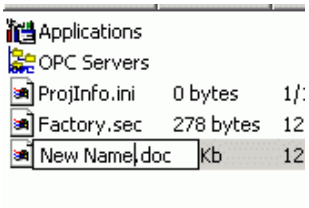
Renaming Project Files

To rename a project file in the ProjectWorX console:
1. Right-click the file and select **Rename** from the pop-up menu, as shown in the figure below.



Renaming a Project File

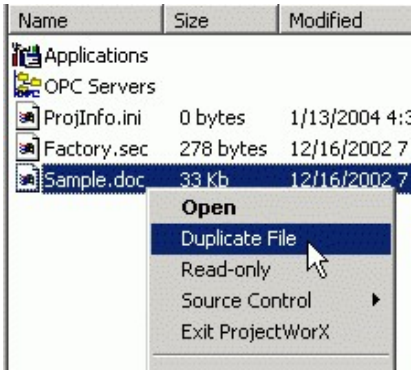
2. The file name field becomes modifiable. Type a new name for the file, as shown in the figure below. Press the **Enter** key.



Typing a New Name for the File

Duplicating Project Files

To make a copy of a project file in the ProjectWorX console:
1. Right-click the file and select **Duplicate File** from the pop-up menu, as shown in the figure below.



Duplicating a Project File

2. A copy of the file appears, as shown in the figure below. You can rename the copy of the file or move the copy to a different project directory.

NOTE
Drag-and-drop and cut-and-paste functions in the ProjectWorX console are similar to those in Windows Explorer, but you can paste and drop files only between trees of the same type. For example, a GraphWorX display file from the GraphWorX tree cannot be copied to the AlarmWorX tree.

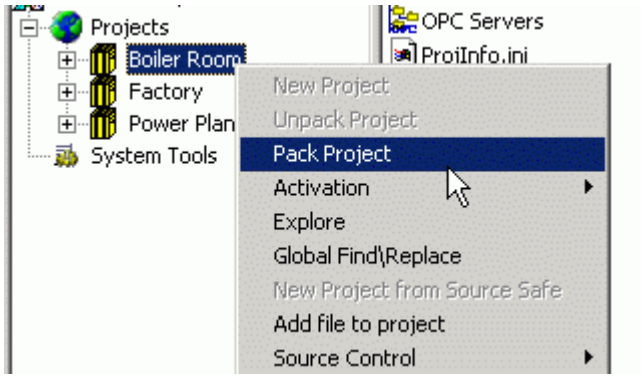
File Copied to Project Folder

Packing and Unpacking Projects

The pack/unpack projects feature of the ProjectWorX console allows you to pack up an entire project (with all included application files) into a single, compressed file. This is especially useful for system administrators who want to configure a project and then send or copy the project to several different computers (e.g. nodes on a network). Then the packed file can be unpacked and run on each computer.

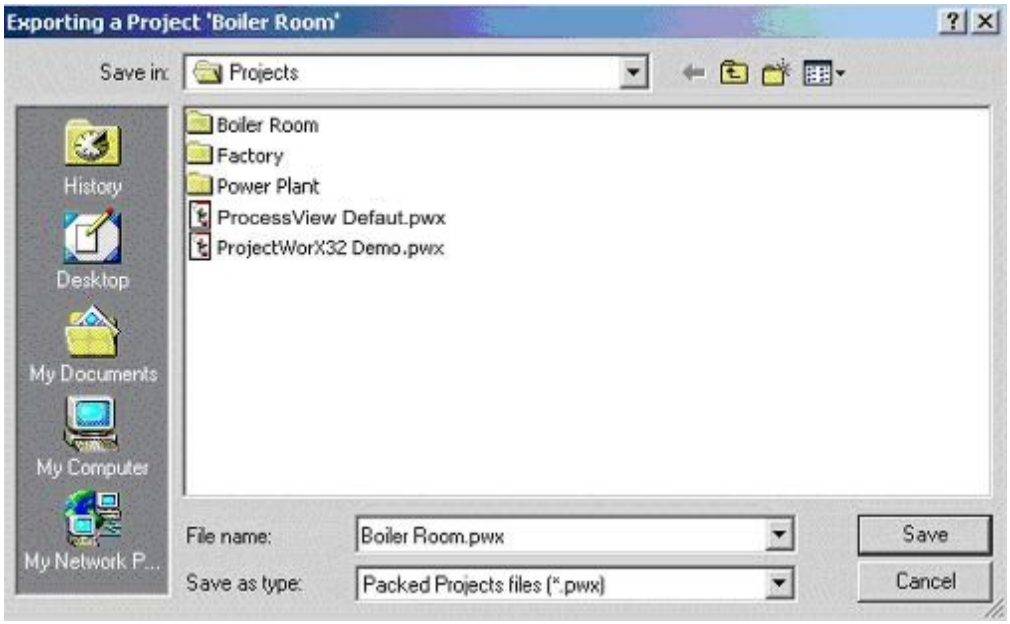
Packing Projects

To pack a project in the ProjectWorX console:
1. Right-click the project in the tree control and select **Pack Project** from the pop-up menu, as shown in the figure below.



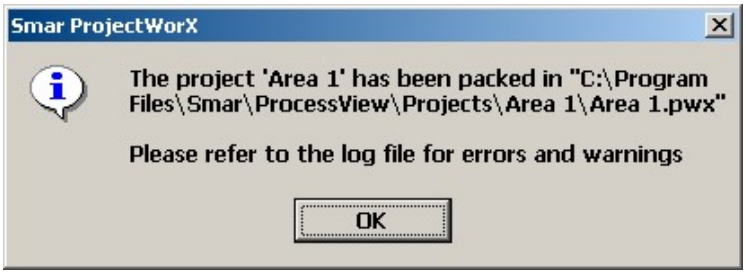
Packing a Project

2. Choose a directory in which to save the packed project (.pwx) file, as shown in the figure below. Give the file a name in the **File Name** field, and then click **Save.**



Saving the Packed Project

3. Once the project has been packed, a confirmation message appears, as shown in the figure below. Click **OK.**



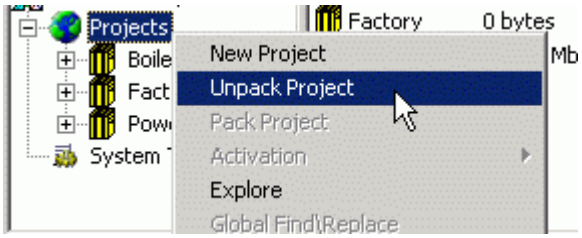
Project Successfully Packed

4. A packing log (HTML) file opens listing the packed files as well as any errors or warnings. The log file is also visible in the project root folder, as shown in the figure below.

Packing Log File

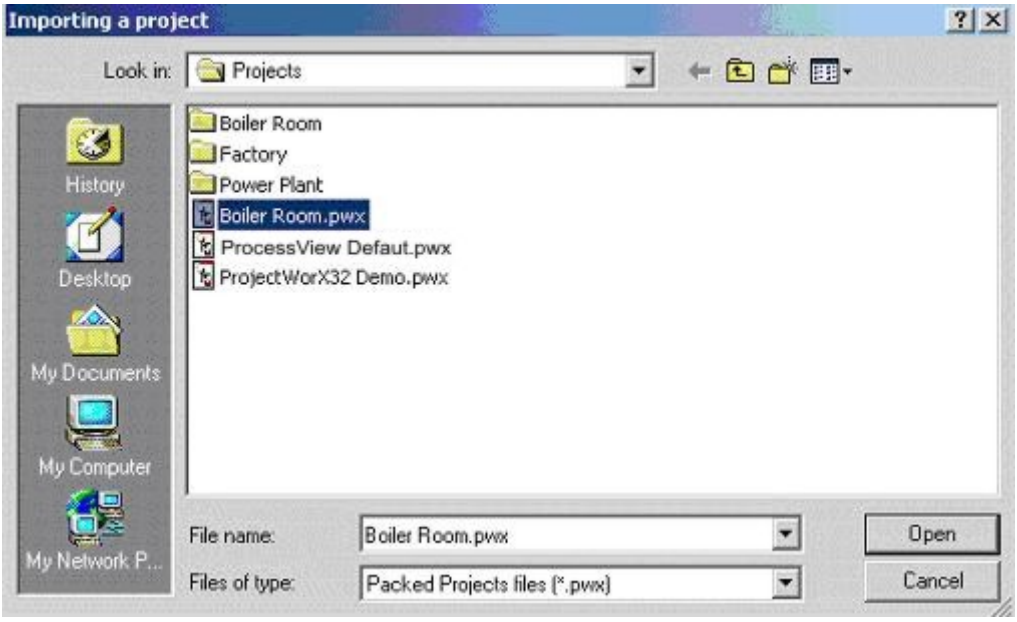
Unpacking Projects

To unpack (import) a packed project in the ProjectWorX console:
1. Right-click project tree control and select **Unpack Project** from the pop-up menu, as shown in the figure below.



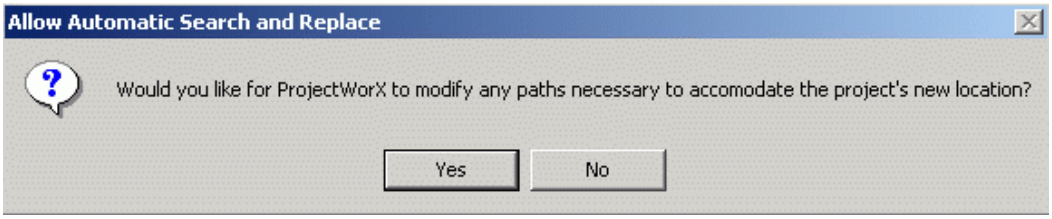
Unpacking a Project

2. Choose a packed ProjectWorX project (.pwx) file, as shown in the figure below. Then click **Open.**



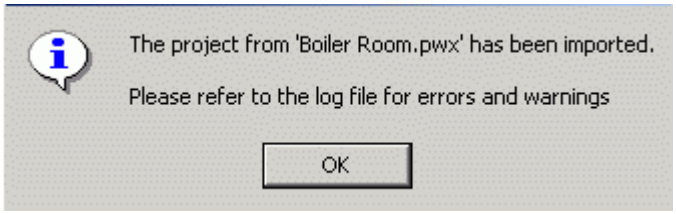
Selecting a Project File to Unpack

3. You will be asked permission to modify pathways to match the new directory location of the unpacked project. If you click **Yes,** the paths will be changed. If you click **No,** the project will retain its original directory paths.



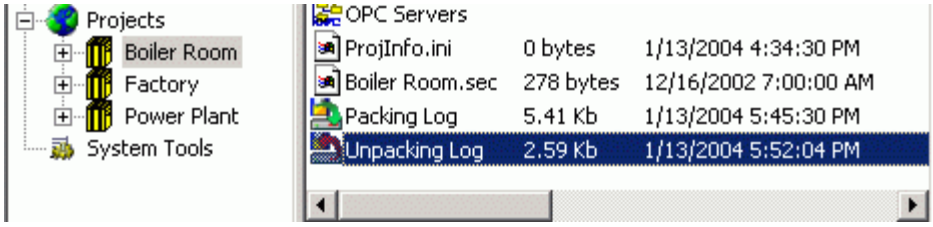
Modifying File Pathways

4. Once the project has been unpacked, a confirmation message appears, as shown in the figure below. Click **OK.**



Project Successfully Unpacked

5. An unpacking log (HTML) file opens listing the unpacked files as well as any errors or warnings. The log file is also visible in the project root folder, as shown in the figure below.



Unpacking Log File

Unpacking Existing Projects

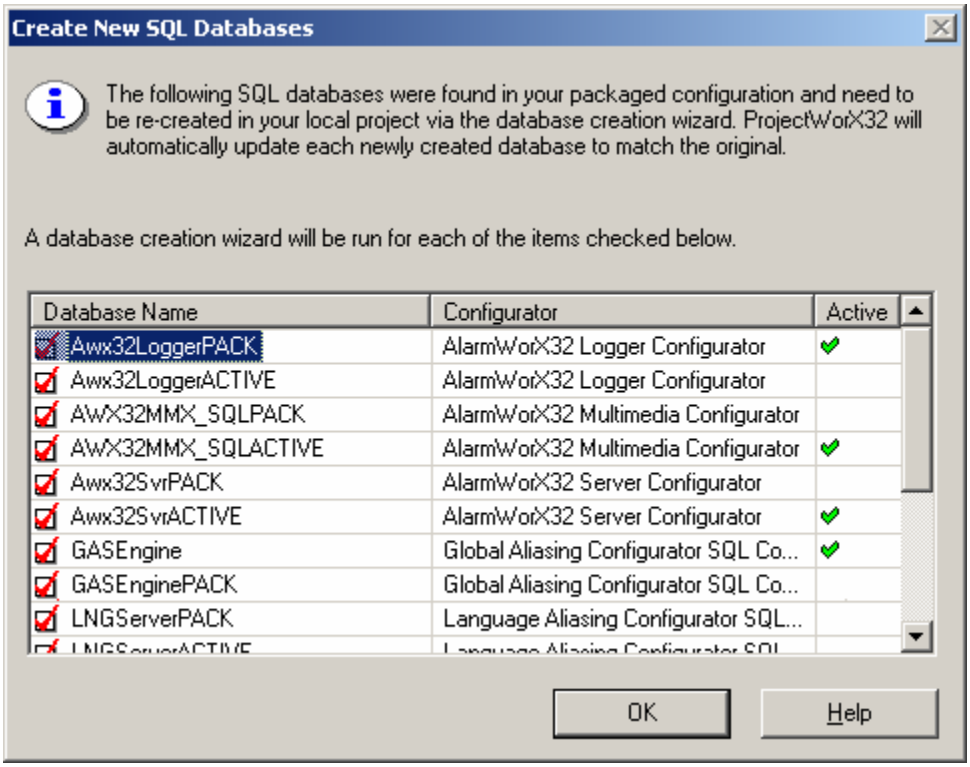
ProjectWorX includes a feature that allows you to overwrite an existing project by unpacking a newer version of that project. For example, if a system administrator makes changes to a project and needs to deploy an updated version of the project to multiple users on different network nodes, each user on each node can unpack and automatically update the project.

When you unpack a packaged (updated) version of an existing project (i.e. a project with the same name) in the ProjectWorX Console, ProjectWorX scans each file in the packaged project. ProjectWorX automatically unpacks any new files in the packaged project (i.e. files that have been added to the project since the last version). For packaged files that already exist (i.e. with the same name) inside the project, ProjectWorX also checks the date/time of the files. If the date/time of a packaged file is the same as the date/time of the existing file of the same name, nothing happens. If a packaged file is newer (i.e. more recent date/time) than the existing file of the same name, ProjectWorX automatically unpacks the newer file and overwrites the existing file. If a packaged file is older than the existing file of the same name, ProjectWorX warns you of this fact and gives you the option to overwrite the file.

NOTE
Difference unpacking of projects will not work for Microsoft SQL Server databases. When unpacking SQL-based configuration files, the files will not be overwritten even if the packed project contains newer files of the same name.

Unpacking Projects That Contain SQL Configuration Databases

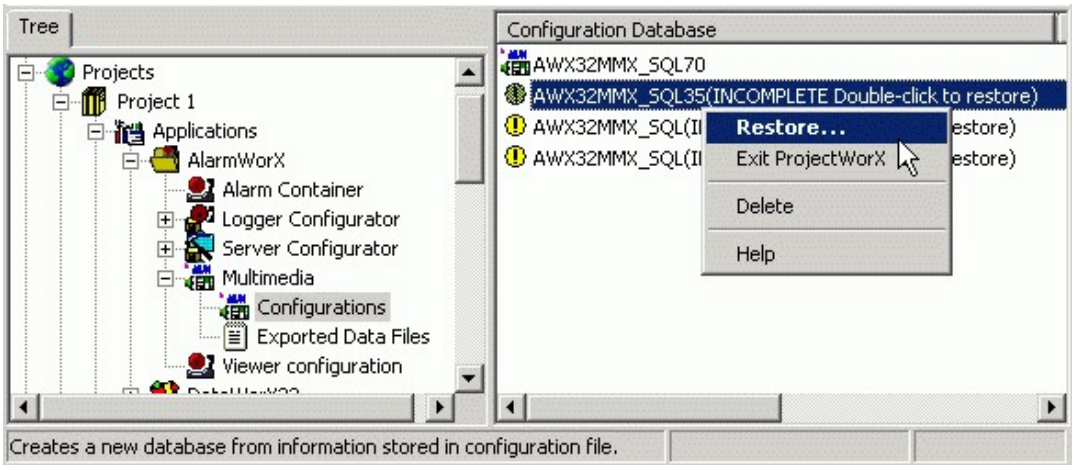
ProjectWorX makes it possible to import configuration databases that reside inside Microsoft SQL Server databases. Several ProcessView applications, such as MobileHMI, AlarmWorX Multimedia, and ReportWorX, use SQL configuration databases. Universal Data Link (.udl) files are used to connect to the Microsoft SQL Server database. ProjectWorX utilizes the import/export capability for the packing and unpacking of SQL items. The advantage of this approach is that all necessary configuration information gets packed up and sent along in concise XML files. The drawback is that, at the time of unpacking, a configurator's "configuration database wizard" must be run in order to create a container database in which to import the XML file. Near the end of the unpacking process, the you see a dialog that looks like the one shown in the figure below.



ProjectWorX Searching for Available SQL Items

While this dialog is open, you can check/uncheck each item by simple clicking on it. If you click **OK,** ProjectWorX will launch the appropriate configuration database wizard for each of the items with a red check mark next to it. By going through the wizard, you are creating an empty "skeleton" database into which ProjectWorX can insert the packed XML file. This allows you complete control over database properties, such as the SQL Server upon which it exists and the maximum log file size. ProjectWorX also remembers which databases were the active databases when the project was packed, and is able to restore that active state upon creation of the database. It is not necessary, in the wizard, to give the unpacked database the exact same name shown in the **Database Name** column in this dialog; you can choose any arbitrary name.

It is important to emphasize that you have the option of skipping one or more wizards at the time this dialog is presented by either un-checking items in the list, or canceling the wizards as they appear. The consequence of this action is that the SQL databases for which the wizard was not run will be incomplete *but they are not lost.* Databases that were not properly set at this stage will appear with an exclamation point icon, as shown in the figure below. These items, as they appear, have restricted functionality. They can only be deleted or restored. You can double-click an item (or right-click and select **Restore**) to launch the appropriate configuration database wizard, as shown in the figure below. ProjectWorX still has the XML file containing the item's configuration and is able to import it into the newly created database.

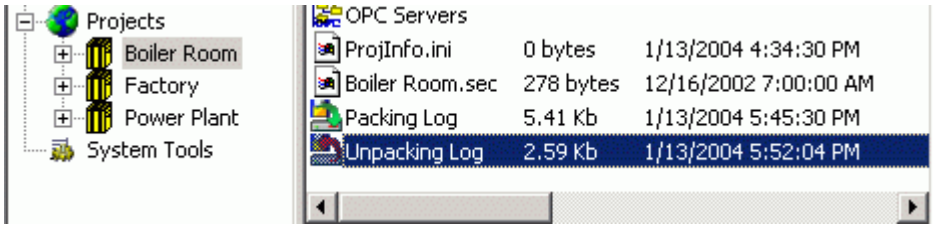


SQL Items As They Appear If They Were Not Completely Configured During Unpacking

Log Files for Packed and Unpacked Projects

When projects are packed or unpacked, a packing log or an unpacking log is created in the project folder, as shown in the figure below. These files contain useful information about what has been packed\unpacked, including any errors and warnings issued during the process.

NOTE
Any referenced files in a project are also packed/unpacked. When unpacking the project, all the referenced files (which are listed with a warning in the packing log file) are placed in the same location as they were initially. ProjectWorX tries to recreate the locations necessary for referenced external files (i.e. files that are located in a directory outside the project folder). Referenced files that are located in a subfolder within the project folder are unpacked into the subfolder.

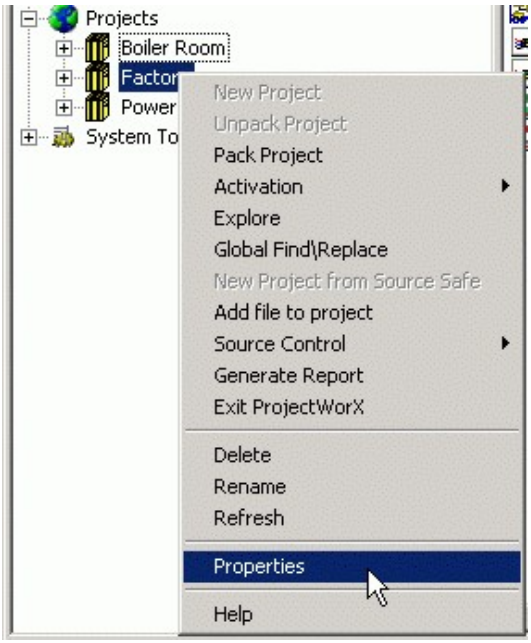


Packing/Unpacking Log Files in Project Folder

Viewing Project Properties

To view or change the settings for a project in the ProjectWorX console:

1. Right-click the project in the tree control and select **Properties** from the pop-up menu, as shown in the figure below.



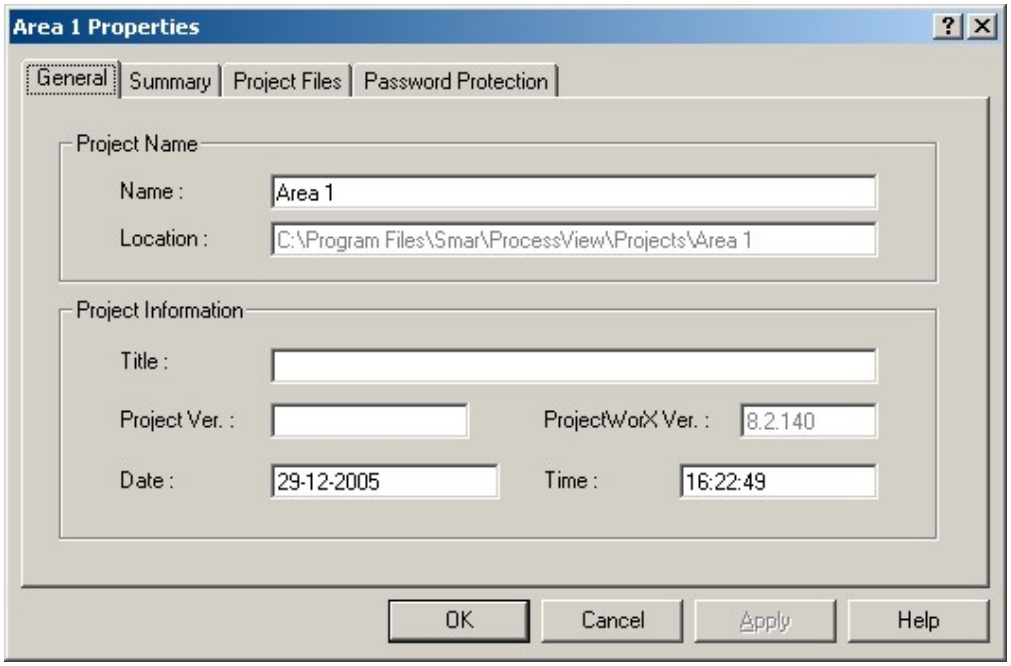
Viewing the Project Properties

2. This opens the **Properties** dialog box for the project, which contains the following tabs:

- General
- Summary
- Project Files
- Password Protection

General Tab

The **General** tab of the project **Properties** dialog box, shown in the figure below, contains the following fields.



Project Properties: General Tab

- **Name:** Displays the project name as it is shown in the **Projects** tree of the ProjectWorX console.

NOTE
You cannot rename the project in the **Properties** dialog box. To rename a project, you must right-click the project in the **Projects** tree of the ProjectWorX console and select **Rename** from the pop-up menu.

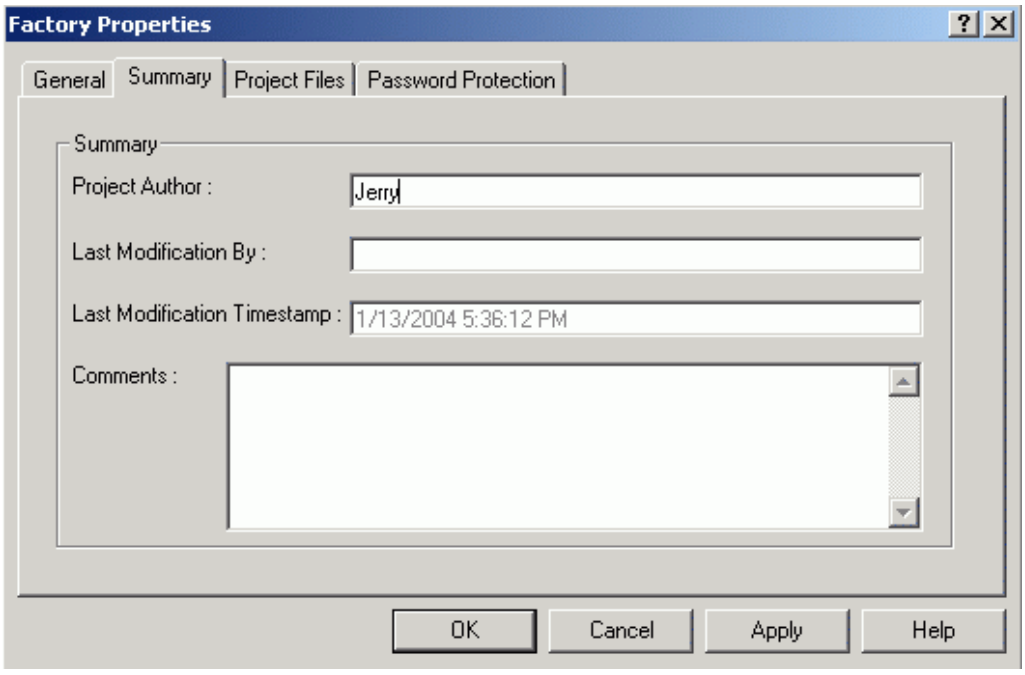
- **Location:** Displays the directory path for the project folder.
- **Title:** Optional field used to describe the project or to provide an alternate or expanded name for the project.
- **Project Version:** If you have multiple revisions of the project, you can give each revision a version number.
- **ProjectWorX Version:** Displays the ProjectWorX version number with which the project was created. (This is important for compatibility with future ProjectWorX versions.)
- **Date:** Displays the reference date for the project.
- **Time:** Displays the reference time for the project.

NOTE
The **Project Version, Date,** and **Time** fields are completely modifiable, and there are no restrictions on the data formats.

Click the **Apply** button to save any changes to these fields.

Summary Tab

The **Summary** tab of the project **Properties** dialog box, shown in the figure below, contains the following fields.



Project Properties: Summary Tab

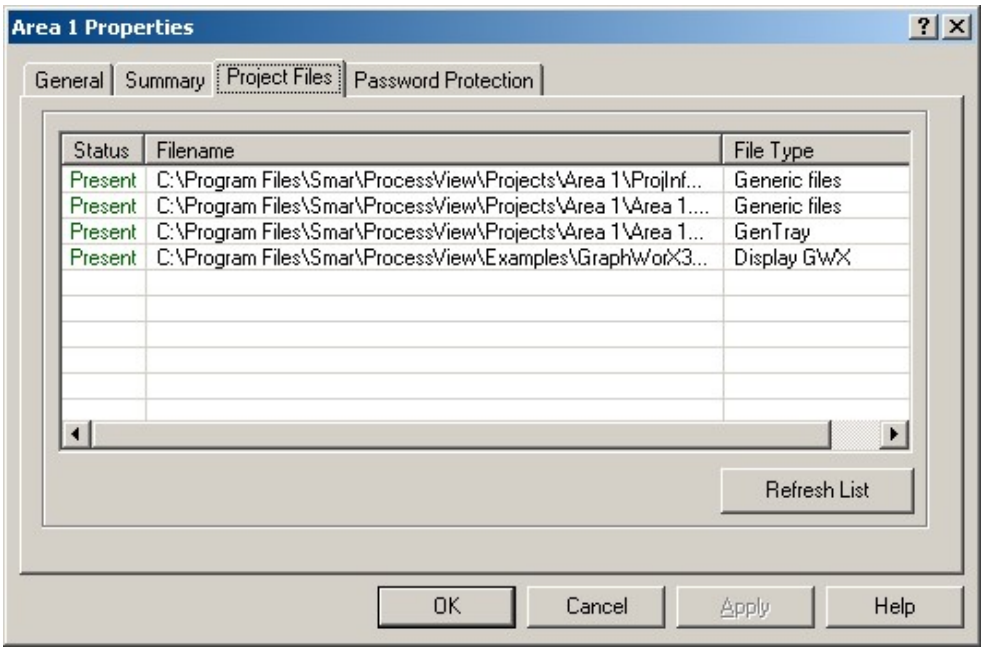
- **Project Author:** Name of the person who created the project.
- **Last Modification By:** Name of the person who made the most recent change to the project.
- **Last Modification Timestamp:** Every time a change is made to the project (e.g. adding or removing a file), this field automatically displays the time and date of the change.

Comments: Provides a blank field for user comments or project descriptions.

Click the **Apply** button to save any changes to these fields.

Project Files Tab

The **Project Files** tab of the project **Properties** dialog box, shown in the figure below, contains three columns: Status, File Name, and File Type.



Project Properties: Project Files Tab

The **Status** column indicates the following general status of the project files as follows:

- **Present** (in green type): The file is found in the directory path indicated in the **File Name** column.
- **Missing** (in boldface red type): The file cannot be found in the specified path. If any files are missing, a warning message is displayed (in boldface red type) in the lower left indicating the number of broken (missing) file links in the project.

If you add a SQL database (e.g. MobileHMI or ReportWorX configuration database), you could have other states reflecting the database status:

- **Can't login:** The database exists, but the user does not have the access rights to log in into it.
- **Offline:** Database is currently offline.
- **Loading:** Database is currently loading.
- **Recovering:** Database is recovering.
- **Suspect:** Database is suspect and then offline.
- **Unreachable**: Database is not available because of an unknown error.

The **File Name** column lists the directory path and name for every file in the project (regardless of the file status).

The **File Type** column provides information about the file type (e.g. GraphWorX display, AlarmWorX container, etc.).

Clicking the **Refresh List** button allows you to dynamically update the files list without having to close and reopen the **Properties** dialog box (i.e. when trying to resolve broken links).

Password Protection Tab

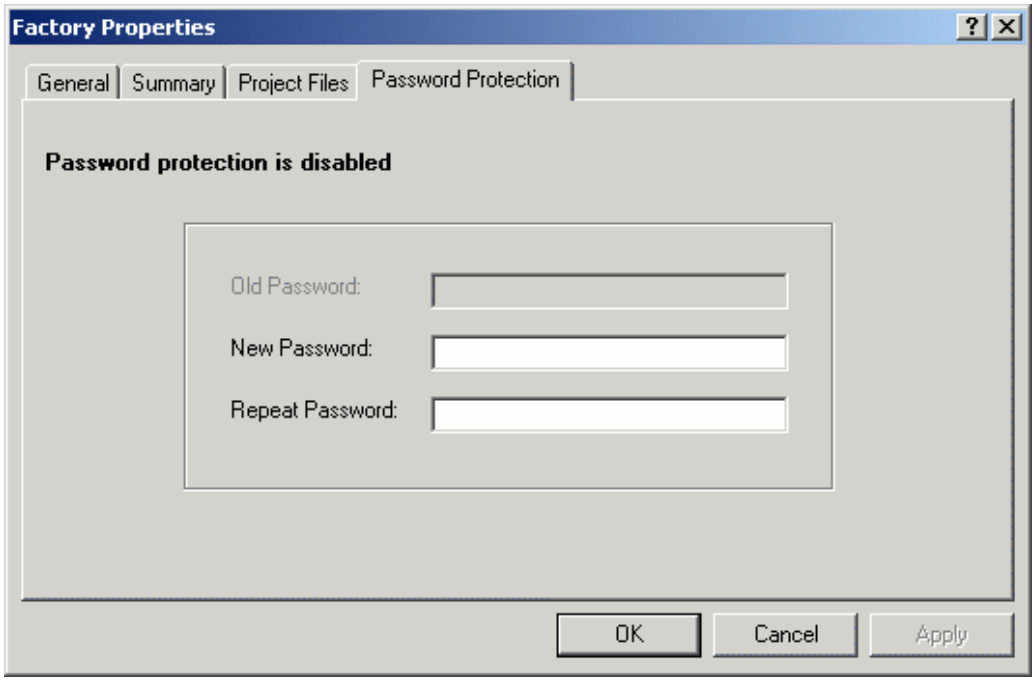
The **Password Protection** tab of the project **Properties** dialog box, shown in the figure below, is used to set the password for each project. This password protects the project from being:

- Accessed through ProjectWorX.

- Unpacked into ProjectWorX.

The project password protection is disabled by default, as shown in the figure below.

NOTE
The project files on the hard drive and the project folder are NOT protected by this password.



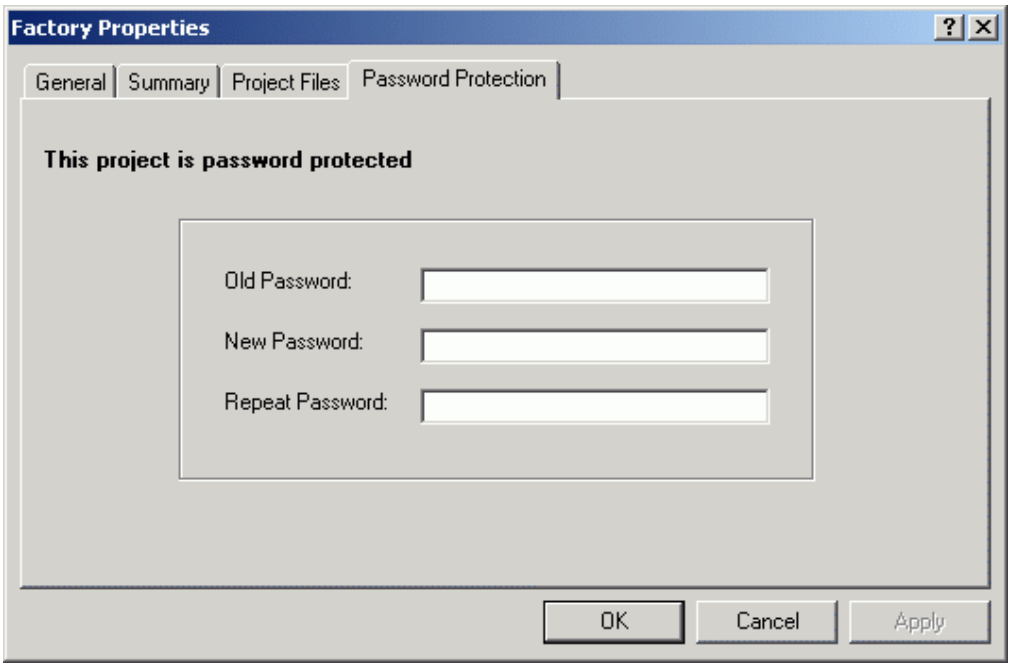
Project Properties: Password Protection Tab

Enabling Project Password Protection

To enable password protection for a project, in the **Password Protection** tab of the project **Properties** dialog:

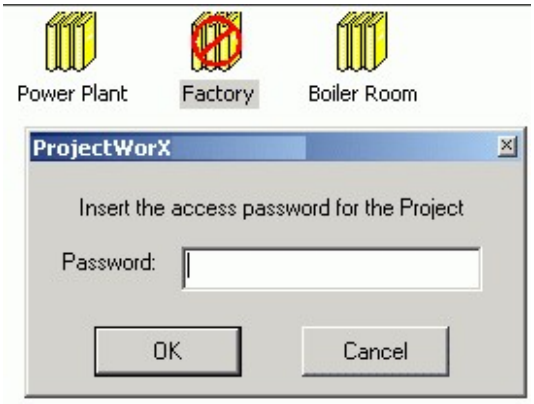
1. Type a password in the **New Password** field.
2. Retype the password in the **Repeat Password** field.
3. Click the **Apply** button.
4. The password is now enabled, and a message appears stating: "This project is password protected," as shown in the figure below. Click **OK.**

NOTE
Passwords are case-sensitive. Once password protection is enabled, the user must also provide the Old Password when changing the password.



Enabling Project Password Protection

Once a project is password-protected, the project's protected status is indicated by a red circle with a slash through it, as shown in the figure below. The next time you try to access the project, you are prompted to enter the password, as shown in the figure below. Enter the password and click OK to gain access to the project.

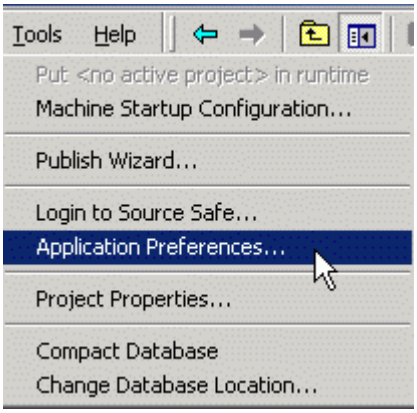


Logging Into a Password-Protected Project

Application Preferences

To view or change the ProjectWorX Application Preferences:

1. Select **Application Preferences** from the **Tools** menu, as shown in the figure below.



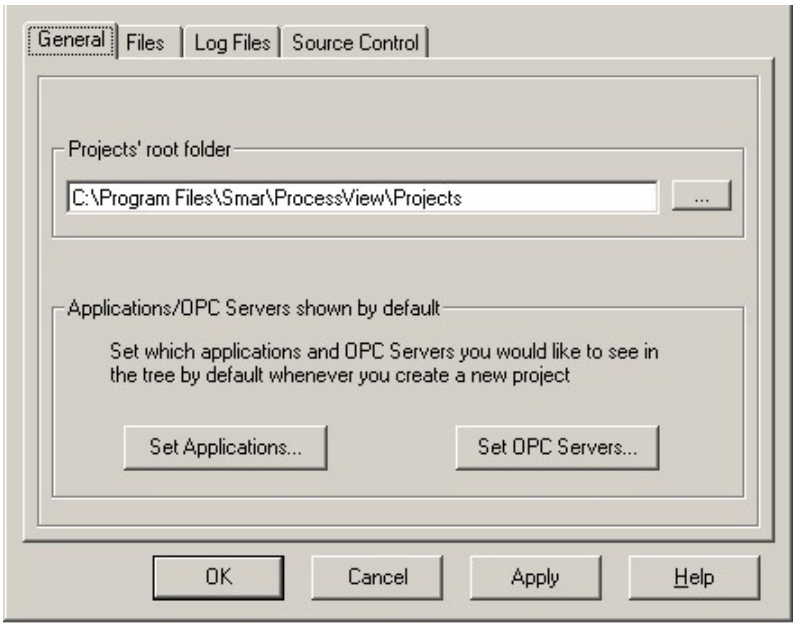
Viewing the Application Preferences

2. This opens the **Application Preferences** dialog box, which contains the following tabs:

- General
- Files
- Log Files
- Source Control

General Tab

The **General** tab of the **Application Preferences** dialog box, shown in the figure below, controls the following basic parameters in ProjectWorX.

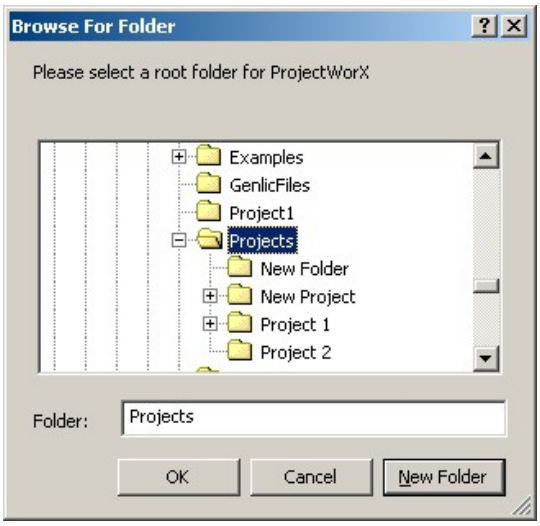


Application Preferences: General Tab

Project Root Folder

You can view/set the **Project Root Folder** from the by clicking the **...** button on the **General** tab of the **Application Preferences** dialog box. Select a folder in which the ProjectWorX database will be stored, as shown in the figure below. Browse for a projects folder, and then click **OK.**

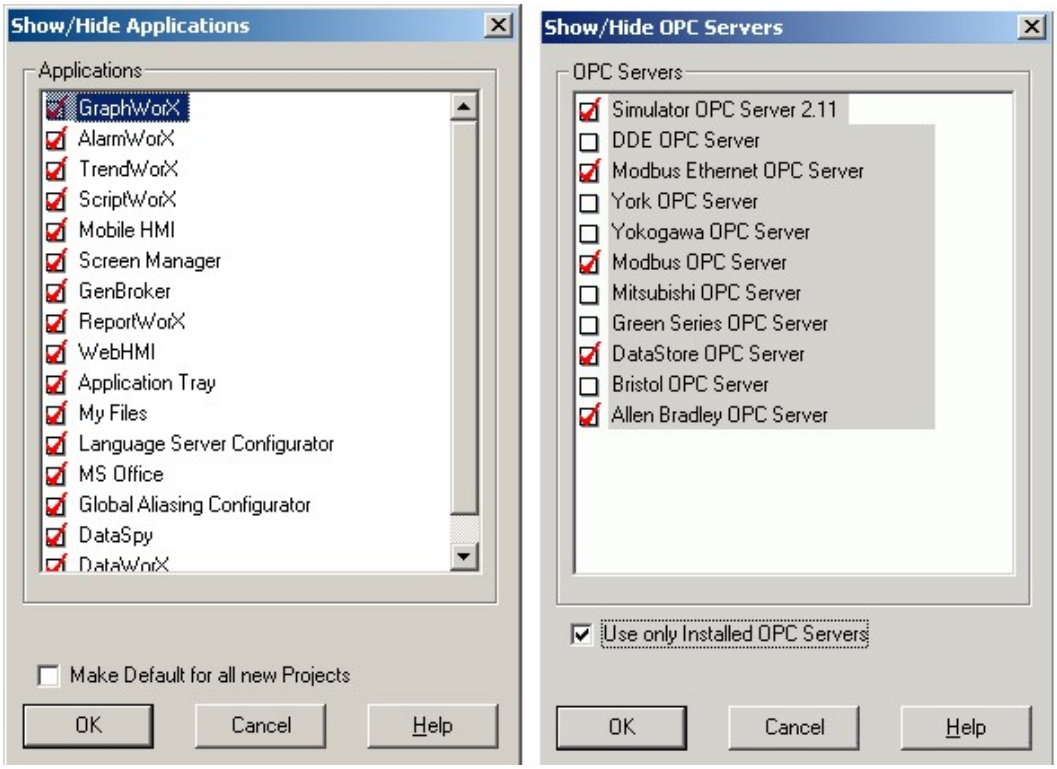
NOTE
This has same behavior as the Change Database Location command on the Tools menu, and changes do not take effect until ProjectWorX is restarted.



Main Projects Folder Selection

Applications / OPC Servers Shown by Default

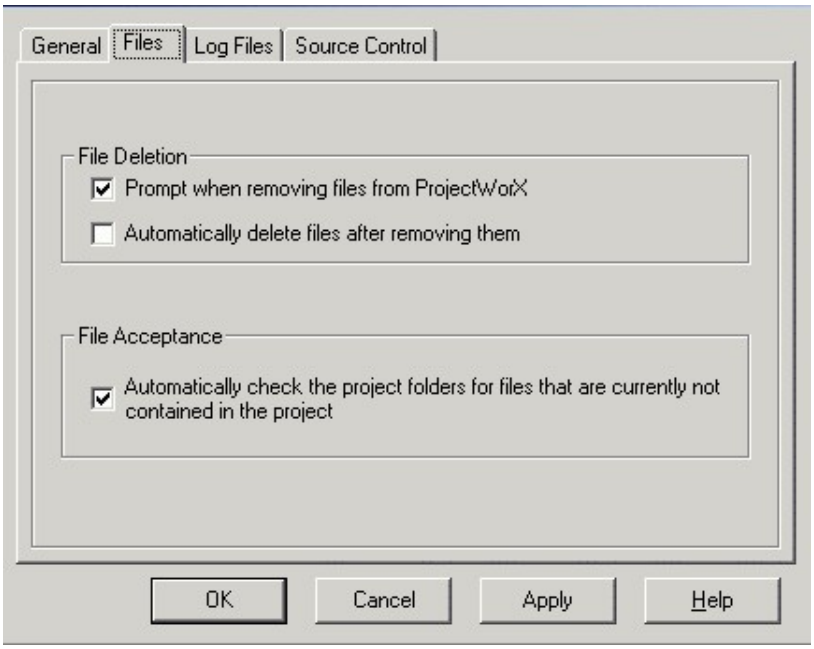
Clicking either the **Set Applications** button or the **Set OPC Servers** button on the **General** tab of the **Application Preferences** dialog box displays a dialog that is nearly identical to the **Customize Applications** or **Customize OPC Servers** dialogs, respectively. Those dialogs, shown below, enable you to customize the applications or OPC servers that appear in the project tree for any given project. The dialogs that appear from the **Applications Preferences** determine the default set-up of all new projects. To hide an application or OPC server from the tree control, simply uncheck the item in the dialog box. See the "Customizing the Projects View" section for more information.



Customizing the Applications and OPC Servers Views

Files Tab

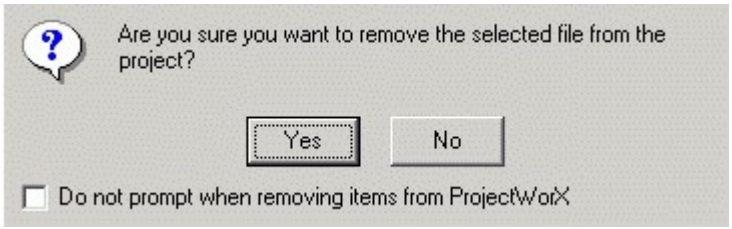
The **Files** tab of the **Application Preferences** dialog box, shown in the figure below, determines the behavior of files added or removed from ProjectWorX.



Application Preferences: Files Tab

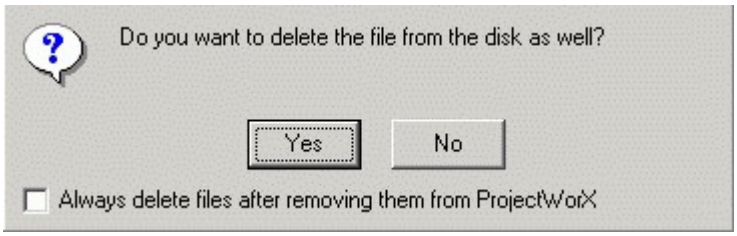
File Deletion

The **Prompt when removing files from ProjectWorX** check box on the **Files** tab of the **Application Preferences** dialog box is checked by default. When you delete a file from a project, a message box appears asking you whether to delete the file, as shown in the figure below. Click **Yes** to delete the file.



Confirming File Deletion

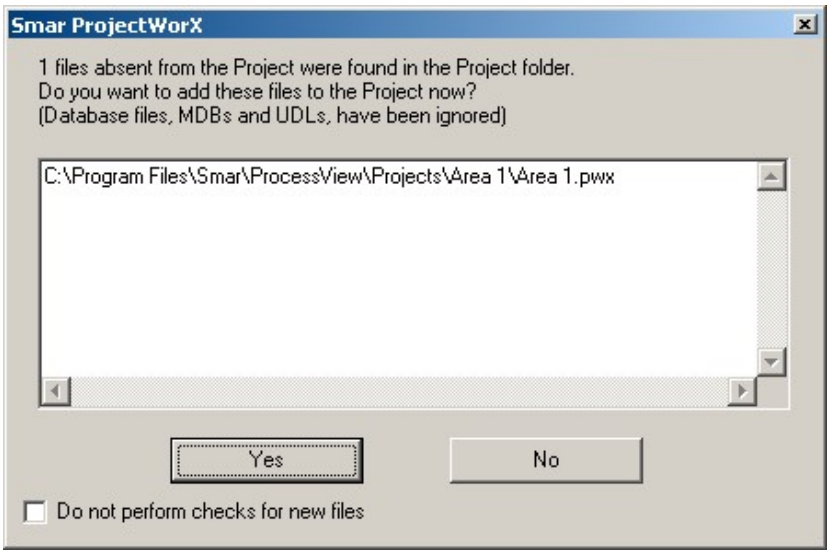
The **Automatically delete files after removing them** check box on the **Files** tab of the **Application Preferences** dialog box is not checked by default. When you delete a file from a project, a second message box appears asking you whether you want to delete the file from the disk, as shown in the figure below. If you click **Yes,** the file is deleted entirely from the project folder. If you click **No,** the folder is hidden from the ProjectWorX console but remains inside the project folder.



Confirming Deletion of File From Project Folder

File Acceptance

The **Automatically check the project folders for files that are currently not contained in the project** check box on the **Files** tab of the **Application Preferences** dialog box is checked by default. If you manually a copy file to a project folder in Windows Explorer, the next time you open that project in the ProjectWorX console ProjectWorX will detect the file and ask you whether to import the file into the project, as shown in the figure below. If you click **Yes,** the file is added to the project tree and is displayed in the right-hand pane of the ProjectWorX console. If you click **No,** the file remains in the project folder but is not imported into to the project and is not displayed in the ProjectWorX console. However, this does not apply to unpacking_log.txt, packing_log.txt and all .mdb and .udl files.



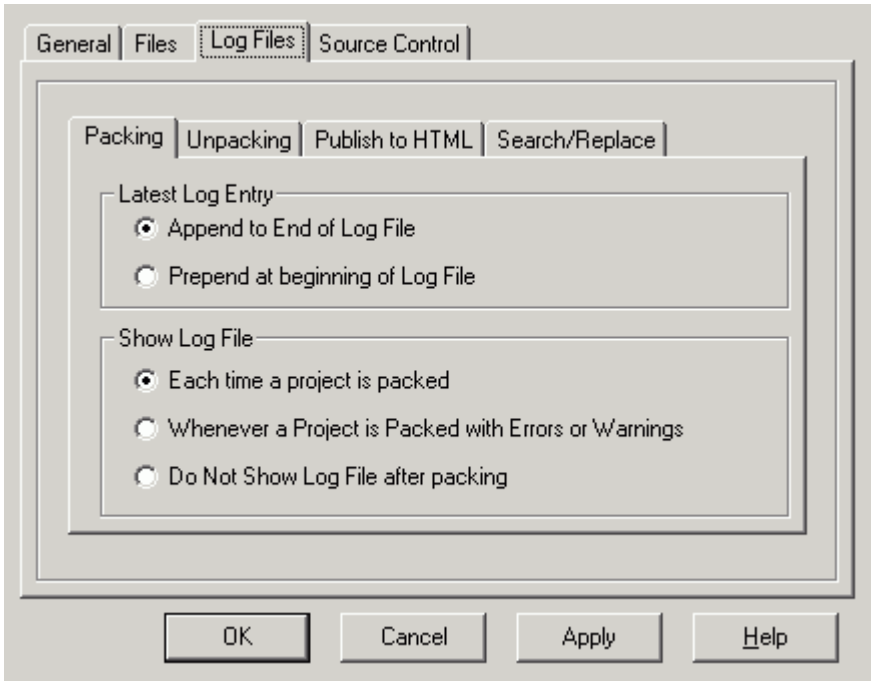
Adding Copied Files to Project

Log Files

The **Log Files** tab of the **Application Preferences** dialog box, shown in the figure below, controls when log files are shown. There are four tabs controlling the four types of log files:

- Packing
- Unpacking
- Publish to HTML
- Search/Replace

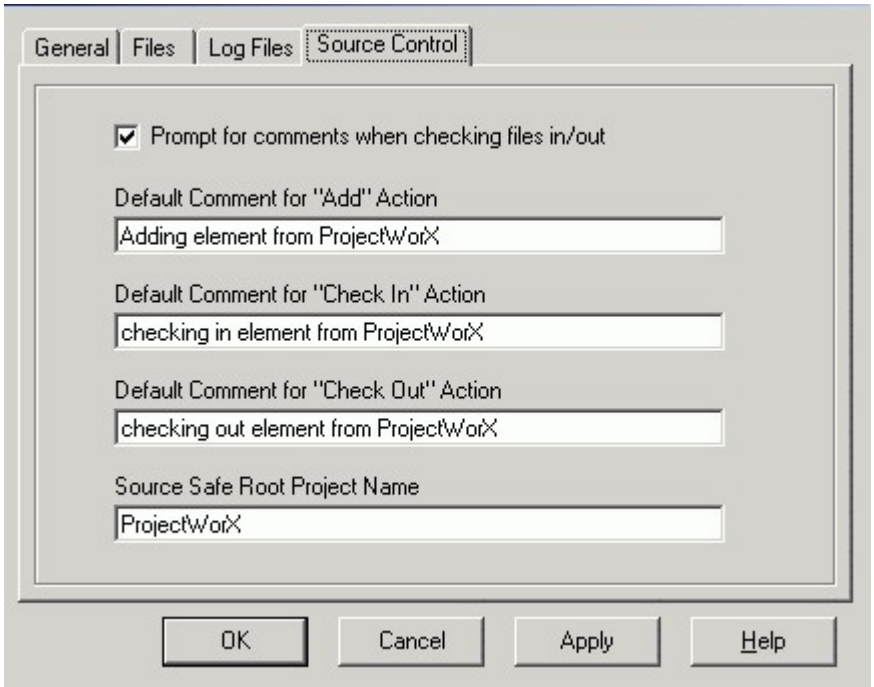
Each tab has the option to show the log file, not show the log file, or have the show/hide behavior depend on the presence or absence of errors and warnings. Additionally, you can select whether the log files append the newest entries at the beginning of the log file or at the end of the log file.



Application Preferences: Log Files Tab

Source Control

The **Source Control** tab of the **Application Preferences** dialog box, shown in the figure below, determines the default settings for backing up project files to Microsoft Visual SourceSafe.



Application Preferences: Source Control Tab

SourceSafe Comments

When you check an item into or out of SourceSafe, you can optionally supply a comment with it. The Prompt for comments when checking files in/out check box on the Source Control tab of the Application Preferences dialog box is checked by default. The default comments seen on the Check in, Check out, and Add dialogs can be adjusted here as well. If you have selected not to show the comments dialogs, then these default comments are automatically applied to items checked into and checked out of SourceSafe.

SourceSafe Root Project Name

The last field, labeled Source Safe Root Project Name, determines the root project upon which all ProjectWorX projects are added into SourceSafe.

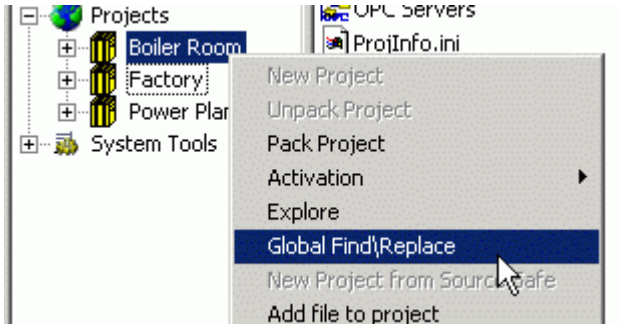
NOTE
In ProjectWorX versions 7.0 and 7.1, this string was hard coded. If you have items that you checked in through ProjectWorX versions 7.0 and 7.1, it is strongly recommended that you do not change this string. While this field is controlled by the registry once it is changed, its default value is "ProjectWorX" (due to the hard-coding in versions 7.0 and 7.1). This “ProjectWorX” string is not affected by providing ProjectWorX with an OEM name. If you really need to change it, you can modify the one and only appearance of the string “ProjectWorX” in the resource .dll (PWX32_ENU.dll).

Using the Find and Replace Utility

The **Global Find/Replace Utility** in ProjectWorX provides a project-wide function to search for and replace machine names, OPC tags, and trend pens throughout all files in a project. The utility applies only to files included in the specified project folder.

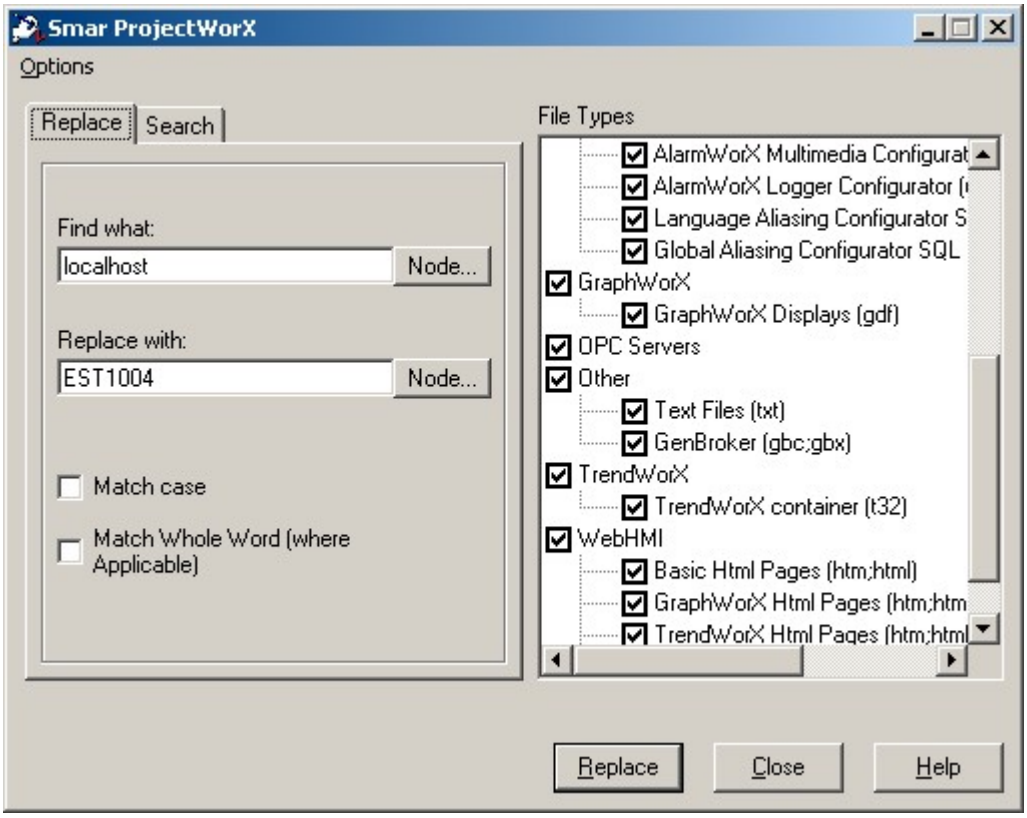
Global Find and Replace Utilty

To use the Global Find\Replace Utility:
1. Right-click a project in the **Projects** tree of the ProjectWorX console and select **Global Find/Replace** from the pop-up menu, as shown in the figure below.



Starting the Global Find/Replace Utility

2. The Global Find\Replace Utility dialog box opens, as shown in the figure below.



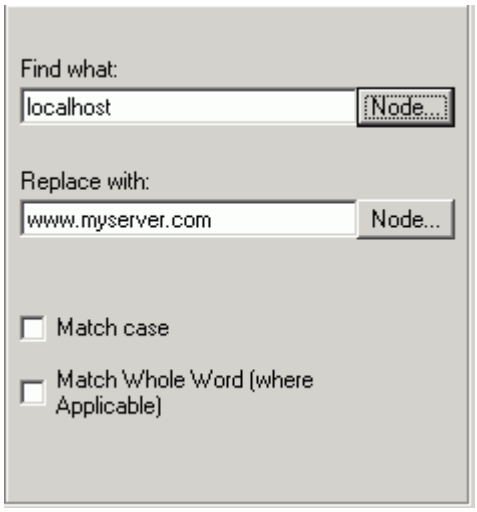
Global Find/Replace Utility

3. Choose the type of file to search for by clicking on the check boxes in the **File Types** column, as shown in the figure above. Functioning like any "find-and-replace" command, the Global Find/Replace Utility in ProjectWorX searches the following file types, which are organized in a tree and are separated by category:

- HTML pages
- Text files
- GraphWorX displays
- TrendWorX Viewer
- AlarmWorX Viewer
- GenBroker
- DataWorX
- TrendWorX Configurator configuration database
- AlarmWorX Server configuration database
- AlarmWorX Logger configuration database
- AlarmWorX Multimedia configuration database
- MobileHMI configuration database
- Language Aliasing Configurator configuration database (Unicode version only)
- Global Aliasing Configurator configuration database
- ReportWorX configuration database
- OPC Server configurations
- Microsoft Excel spreadsheets

A category can be collapsed or expanded by double-clicking on the category name. Collapsed items inform you of the number of items inside that are checked versus the total number of items inside. You can check/uncheck individual items or an entire category. An unchecked category turns search and replace off for all the items it contains.

4. The Global Find/Replace Utility searches for the text typed in the **Find what** field and replaces it with the text typed in the **Replace with** field, as shown in the figure below.

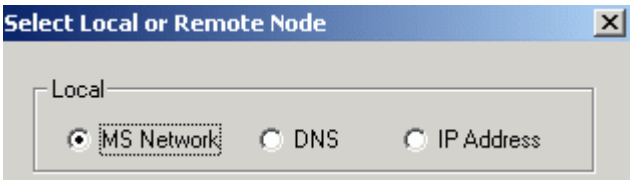


Specifying Search Parameters

5. Choose from the following search parameters:

- **Match case:** Performs a case-sensitive search.
- **Match whole word:** Performs a search/replace only on the entire word.

6. Clicking the Node buttons opens the Select Local or Remote Node dialog box, as shown in the figure below. The three radio buttons (**MS Network, DNS** or **IP Address**) allow you to change the name or address in the **Replace with** field. A node name or IP address appears in the **Replace with** field if you select one of these options.



Microsoft Network Option

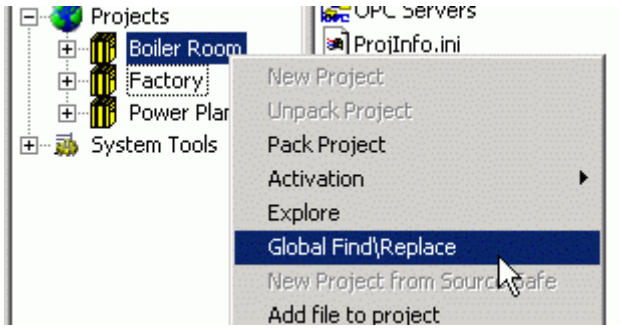
7. The **Options** menu at the top-left corner of the Global Find/Replace Utility, shown in the figure below, allows for multiple select/deselect of items. The **Select All** and **Deselect** all menus respectively select and deselect all of the items through the entire tree. If the focus is currently on a particular category, then the bottom two menu options will select/deselect all items in the currently selected category.

Find/Replace Selection Options

Using the Global Search Feature

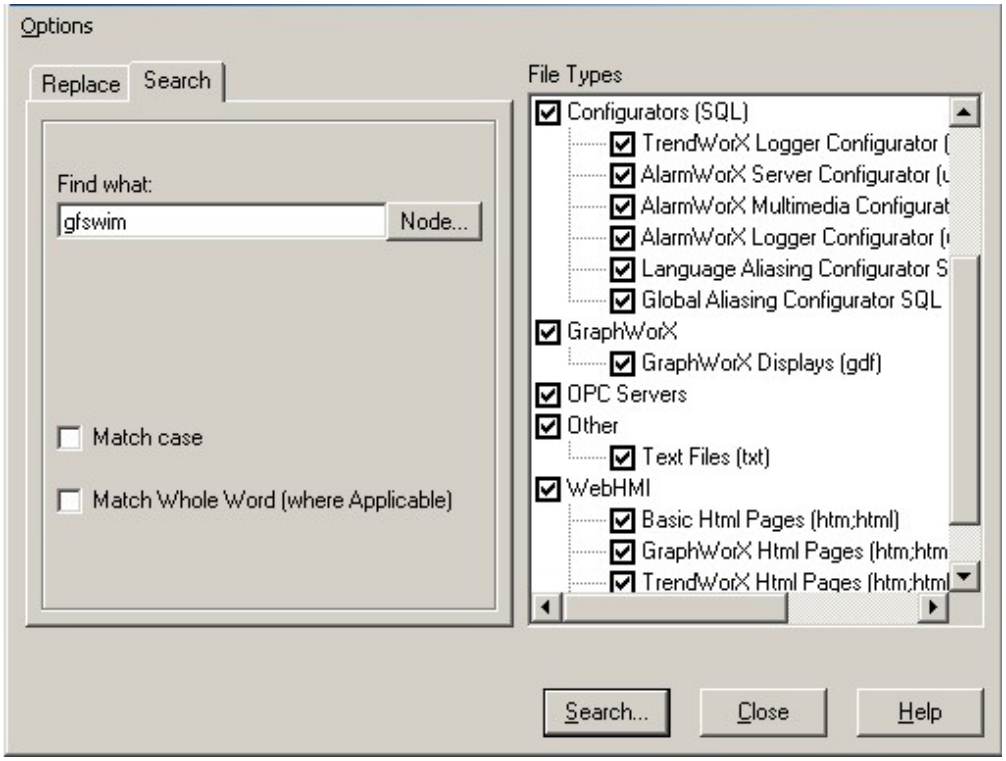
In addition to the find/replace function, ProjectWorX allows you to perform a basic search operation (e.g. for an OPC tag) across files in a project. An example search is described below:

1. Create one or more GraphWorX displays in a project.
2. For each display, map one or more tags to a simulated tag, such as "gfwsim.ramp.long."
3. Right-click on the project and select **Global Find/Replace** from the pop-up menu, as shown in the figure below.



Starting the Global Find/Replace Utility

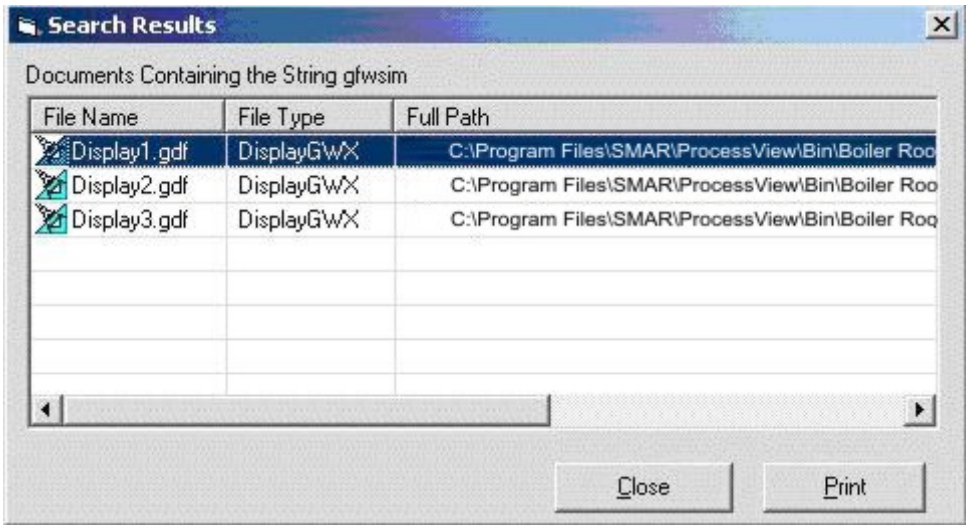
4. This opens the find/replace dialog box. Click on the **Search** tab, as shown in the figure below, and type "gfwsim" in the **Find what** field. Click the **Search** button.



Performing a Global Search

5. The Search Results dialog box appears, as shown in the figure below. This dialog lists all GraphWorX displays (file name, file type, and directory path) in the project that contain the search parameter "gfwsim." Double-clicking on any of these displays will launch the display.

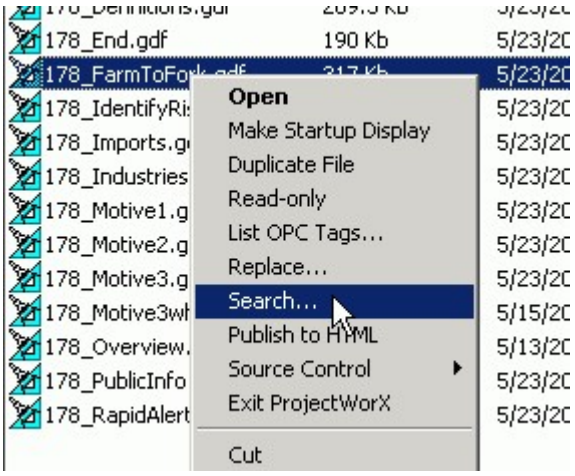
NOTE
GraphWorX displays are used here as an example. The global search feature works for all file types listed in the box on the right hand side of the Search dialog box.



Viewing the Global Search Results

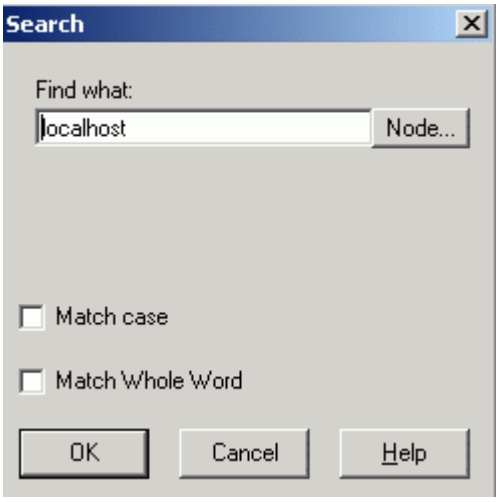
Search and Replace Individual Files

You can perform a search and replace function on an individual file rather than having to go through the Global Search and Replace Utility. Simply right-click on a file and select **Search** or **Replace** from the pop-up menu, as shown in the figure below.

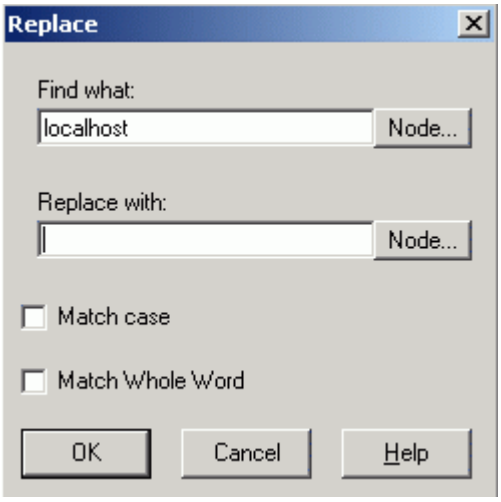


Search and Replace for Individual Files

These two dialogs are simply miniature versions of the Global Search and Replace Utility. The **Node, Match Case,** and **Match Whole Word** options have the same behavior as they do in the Global Search and Replace dialog.



Searching an Individual Item



Replacing an Individual Item

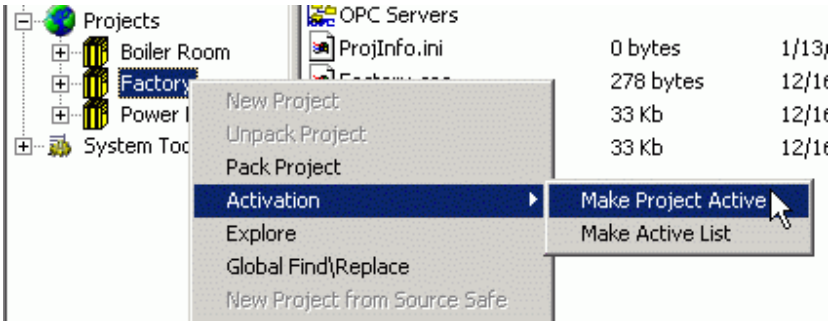
Activating and Running Projects

The ProjectWorX console enables you to create and manage multiple ProcessView projects, each of which may contain many different types of application files. Only one project can be put into runtime mode at a time. In order to enter a project into runtime mode, you must first designate the project as the currently active project. When you make a project active in the ProjectWorX console, all the connected included databases that are active for the project and all the settings to properly set up the ProcessView Tray are "made active" on the current machine. If there are multiple configuration databases for a single application within the active project, only the active database for that application will enter runtime mode.

Making a Project Active

To make a project active in the ProjectWorX console:

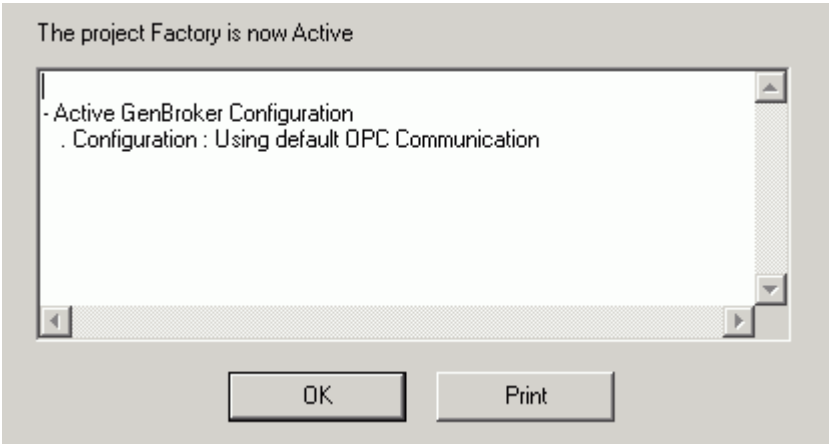
1. Right-click the project in the tree control and select **Activation > Make Project Active** from the pop-up menu, as shown in the figure below.



Making a Project Active

2. A dialog box appears confirming that the project is now active, as shown in the figure below. This dialog box provides a final report after activating the project. Click **OK.**

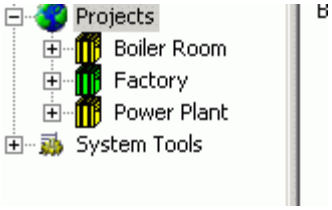
NOTE
You can also view the activation report at any time by choosing select **Activation > Make Active List** from the pop-up menu, as shown in the figure above. Click **Print** if you want to print out the activation report.



Project Activation Confirmed in the Activation List

3. The icon for the project is now green to indicate that it is the currently active project, as shown in the figure below.

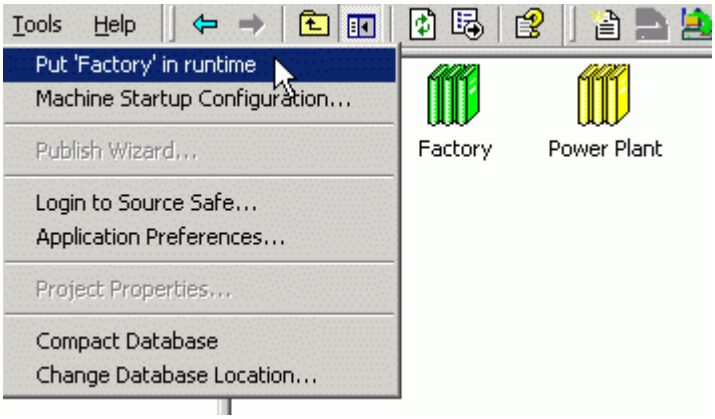
NOTE
Activating a project does NOT set the active project into runtime mode. For information about how to enter a project into runtime mode, see **Starting the Active Project** below.



Active Project Indicated by Green Icon in ProjectWorX Console

Starting the Active Project

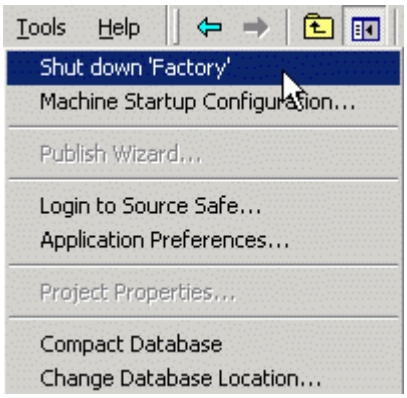
Once you have activated a project, you can enter the entire project into runtime by selecting **Put [Project Name] in Runtime** from the **Tools** menu, as shown in the figure below. The name of the currently active project appears in the **Tools** menu command. In the example shown below, the project called "Factory" is the currently active project, so selecting **Put 'Factory' in Runtime** from the **Tools** menu enters the project into runtime mode.



Starting the Active Project

Stopping the Active Project

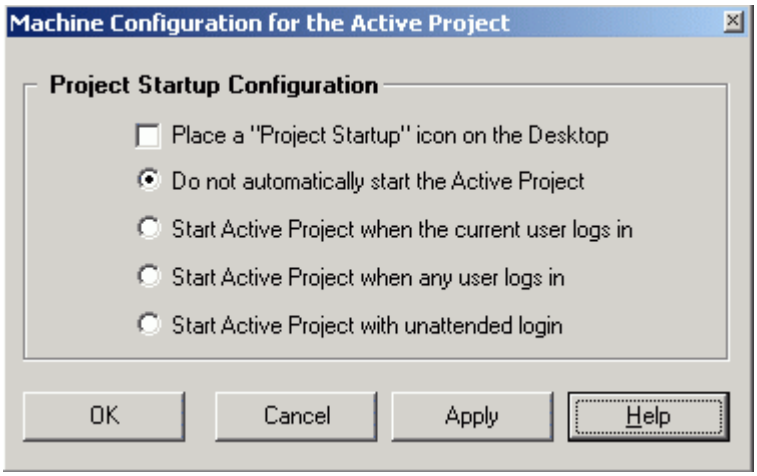
To take the active project out of runtime mode, select **Shut Down [Project Name]** from the **Tools** menu, as shown in the figure below. The name of the currently running, active project appears in the **Tools** menu command. In the example shown below, the project called "Factory" is the currently running active project, so selecting **Shut Down 'Factory'** from the **Tools** menu stops the project.



Stopping the Active Project

Machine Startup and Project Runtime Settings

In the **Tools** menu, particular attention must be given to the Machine Startup Configuration. Selecting **Machine Startup Configuration** from the **Tools** menu opens the **Machine Configuration for the Active Project** dialog box, as shown in the figure below. These startup settings apply to the computer on which the active ProjectWorX project is currently running. This means that the dialog startup settings are applied to the currently active project for that computer. Thus, if the active project changes after some of these settings have been decided, then the settings will automatically be applied to the newly activated project.



Machine Startup Settings

Checking Place a "Project Startup" icon on the Desktop creates a shortcut to the ProcessView Tray application on your computer's desktop. ProcessView Tray is used to launch ProcessView applications from the Windows taskbar.

The following runtime options are available for the active project:

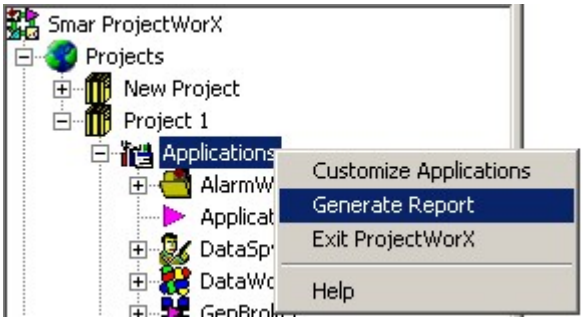
- **Do not automatically start the Active Project:** When selected, the active project must be started manually by choosing **Put [Active Project] in Runtime** from the **Tools** menu.
- **Start Active Project when the current user logs in:** When selected, the active project is entered into runtime mode when the current user logs into the Security Server.

- **Start Active Project when any user logs in:** When selected, the active project is entered into runtime mode when any user logs into the Security Server.
- **Start Active Project with unattended login:** When selected, the active project is entered into runtime mode even if no one logs into the computer.

Generating Reports

ProjectWorX allows you to automatically create HTML reports by simply selecting a menu from the ProjectWorX console. From any point in the ProjectWorX tree, you can right-click on an item and select **Generate Report** from the pop-up menu, as shown in the figure below. An HTML report of all applications at or below the selected item will be generated. The report lists any files, if they exist, in a table along with their sizes and dates modified. The closer to the root that one generates a report, the more items the report will cover. For example, clicking the GraphWorX tree will generate a report that covers displays, templates, and symbols. Clicking the Applications tree will generate a report that covers every application, including its respective components, under the Applications tree.

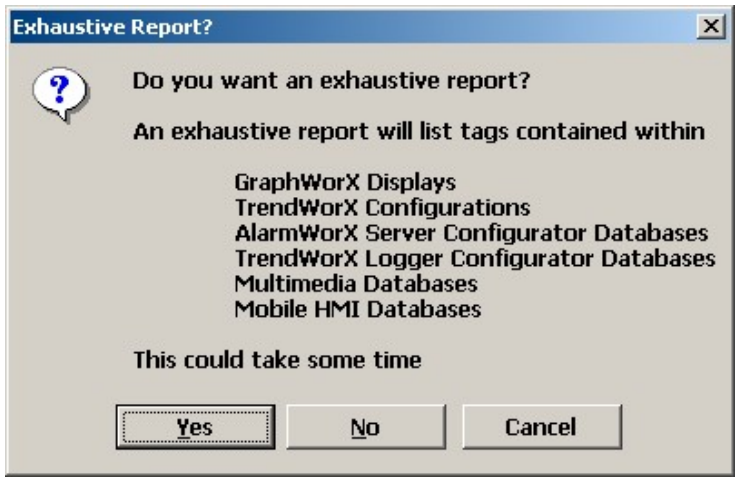
To create a report:
1. Right-click an item in the ProjectWorX console tree control and select **Generate Report** from the pop-up menu, as shown in the figure below.



Creating a Report

2. A message box will ask whether to generate an **Exhaustive** report, as shown in the figure below. If you select **No,** then the report will not go any further than reporting the files contained within the tree. If you select **Yes,** then the report will find all OPC tags within GraphWorX displays, TrendWorX configuration databases, and Alarm Server configuration databases and list them below each respective item listed in the report.

NOTE
An exhaustive report can take substantially longer to create than a nonexhaustive report.

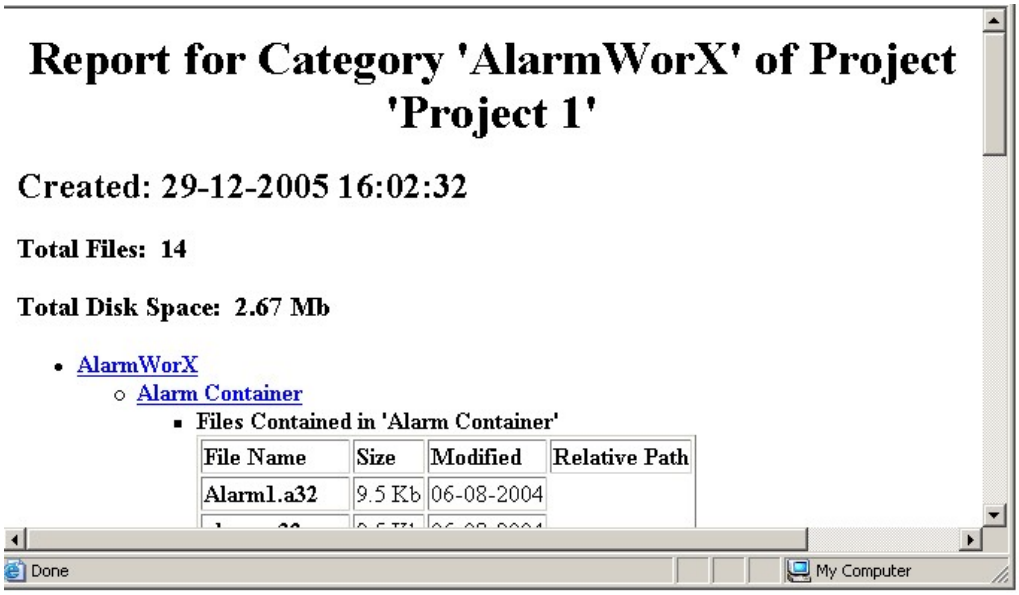


Exhaustive Report

3. A report for the selected item is generated in an HTML file, as shown in the figure below. This particular report was generated by selecting **Generate Report** at the root of the **Applications** tree for a project called "Factory." Each tree item underlined in boldface blue type can be clicked to expand/contract its child branches. (Items will not be expanded, however, if they have no children. For example, there may be no GraphWorX displays, and therefore, clicking on "Displays" will do nothing.) The top of the report contains a title, a date, and summary information on the number of files and total size of all items in the project.

In an exhaustive report, all of the OPC tags contained within a display are shown under the appropriate display files. In this case, clicking on a file name will collapse the tags seen, and clicking on it again will expand those tags.

NOTE
Any files that are in the project, but physically missing, will appear in boldface red type.



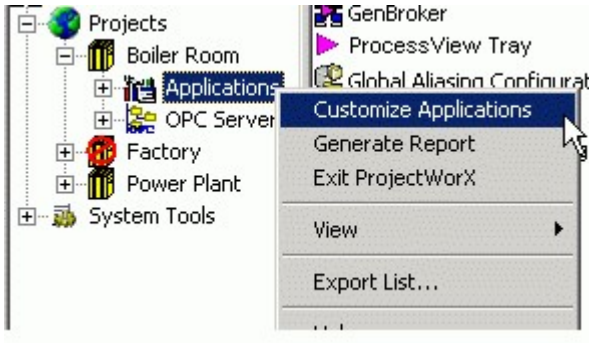
HTML Report Generated

Customizing the Projects View

You can customize the appearance of the tree control for each project by choosing which **Applications** or **OPC Servers** to display and the order in which to display them.

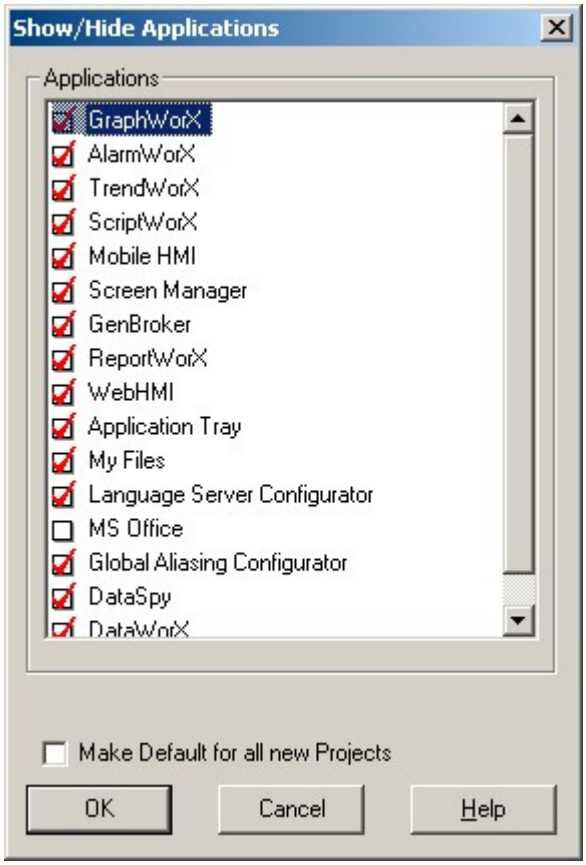
To customize the projects view:

1. Right-click the **Applications** tree or the **OPC Servers** tree and select **Customize** from the pop-up menu, as shown in the figure below.



Customizing the Projects View

2. This opens the **Show/Hide** dialog box, as shown in the figure below. The checked items currently appear in the ProjectWorX console. To hide an application from the tree control, simply uncheck the item in the dialog box. If the **Make Default for All New Projects** check box is checked, the Show/Hide settings will be automatically be applied to all new projects created thereafter. Click **OK.**



Choosing Which Applications to Hide/Display

NOTES
You have the option of displaying the Microsoft **(MS) Office** tree. This tree manages files for Microsoft Word, Microsoft PowerPoint, Microsoft Excel, and Microsoft Access. When enabled in the **Show/Hide Applications** dialog box, the **MS Office** tree is displayed under the project **Applications** tree. By default, only currently installed OPC servers are displayed in the **OPC Servers** tree of the ProjectWorX console. To disable this default setting, uncheck the **Use Only Installed OPC Servers** check box in the **Show/Hide OPC Servers** dialog box, as shown in the figure above.

Adding Custom Items to the Projects Tree

ProjectWorX has the ability to detect and add additional products to either the “Applications” node or the “OPC Server” node in a project. Adding additional products, however, requires that one supply the appropriate icons and string constants to ProjectWorX. Moreover, one must supply custom code to interface with the application being added (how to launch the application, how to perform custom actions, etc, Boolean values for which custom actions are supported, etc.) Smar has a Microsoft Visual C++ plug-in, serving as a “New Workspace” wizard, that generates a skeleton workspace which, when compiled, will add a custom application to ProjectWorX. This feature is not provided with the standard ProcessView installation. Please contact Smar Technical Support for more information on this custom application toolkit.

Chapter 3

MANAGING APPLICATION FILES

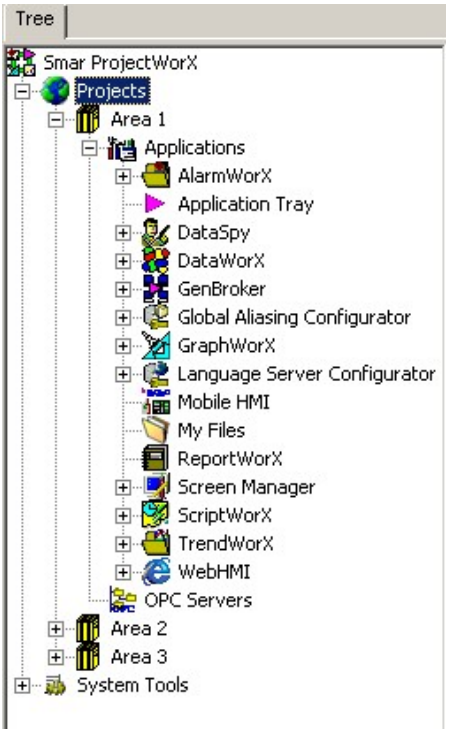
Overview of Application Folders and Files

The top-level tree for each project in the ProjectWorX console contains two primary subtrees: **Applications** and **OPC Servers.** The **Applications** tree for each project, shown in the figure below, many ProcessView client applications and components:

- AlarmWorX
- DataWorX
- GenBroker
- ProcessView Tray
- Global Aliasing Configurator
- GraphWorX
- Language Aliasing Configurator (Unicode version only)
- Microsoft (MS) Office
- MobileHMI
- My Files
- OPC DataSpy
- ReportWorX
- Screen Manager
- ScriptWorX
- TrendWorX
- WebHMI

Each of these application trees has several additional modules or components. For example, the AlarmWorX tree contains files for the AlarmWorX Container, Logger Configurator, Server Configurator, Multimedia Configurator, and Viewer.)

NOTE
For detailed information about each application, please see the application's Help file.



Project Applications Tree

Adding and Creating Application Files

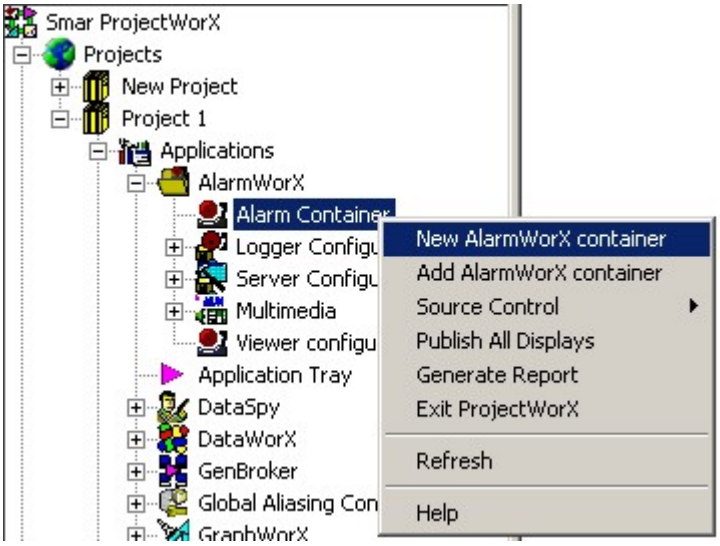
The **Applications** tree in the ProjectWorX console allows you to manage your ProcessView projects by adding or creating new files for each application component.

Creating a New Application File

Each time you create a new application file inside a project in the **Applications** tree of the ProjectWorX console, the new file is saved to the main project directory. Although the file types vary with each ProcessView application (e.g. display files, Microsoft Access configuration databases, etc.), the following method for creating new application files is the generally the same for each application in the ProjectWorX console. An example is shown below using the AlarmWorX Container:

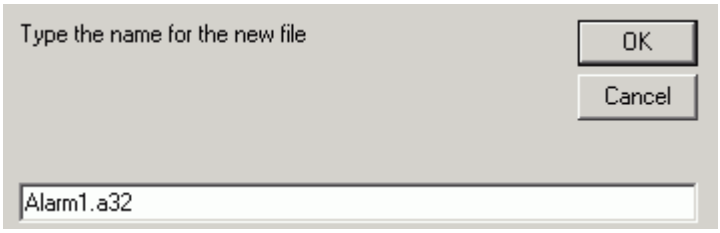
NOTE
Microsoft SQL Server configuration files are handled differently. Please see "Adding a SQL Server Configuration Database to a Project" below for more information.

1. Right-click the desired component (e.g. Alarm Container) in the application tree (e.g. AlarmWorX) in the ProjectWorX console and select **New [File Type]** (e.g. New AlarmWorX Container) from the pop-up menu, as shown in the figure below.



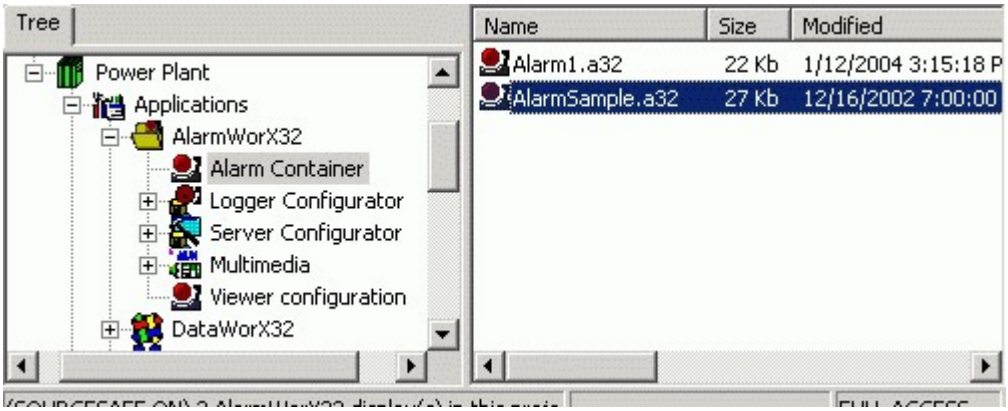
Creating a New Application File in a Project

2. Give the new file a name, as shown in the figure below. Click **OK.**



Naming the New File

3. The new file appears in the component tree (in this case the Alarm Container) and is displayed in the right-hand pane of the ProjectWorX console, as shown in the figure below. ProjectWorX automatically launches the new file in the selected application (Alarm Container).



File Added to Application Component Tree in Project

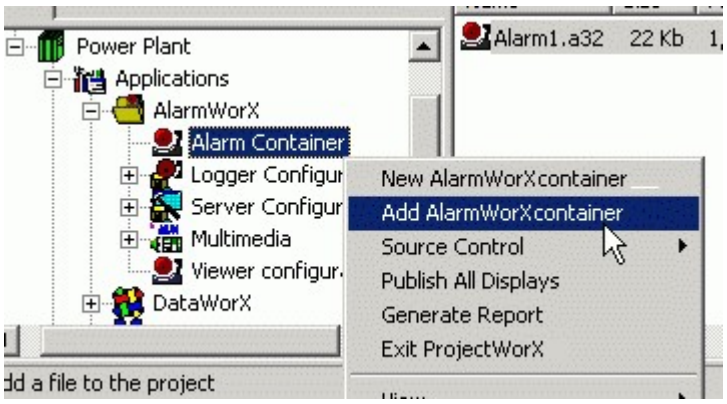
Adding an Application File to a Project

When you add an existing application file to a project in the **Applications** tree of the ProjectWorX console, you have the option of copying the file to the project folder or running the file from its current location. Although the file types vary with each ProcessView application, the following method for adding existing application files is the generally the same for each application in the ProjectWorX console.

NOTE
The method for adding Microsoft Access configuration databases is generally the same as the method for adding application files.

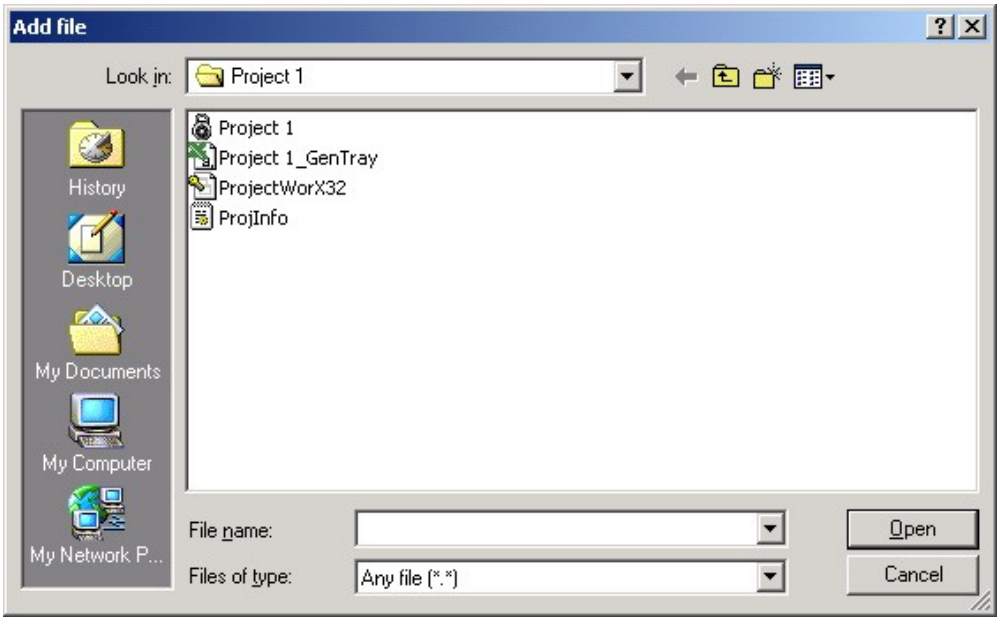
An example is shown below using the AlarmWorX Container:

1. Right-click the project and select **Add [File Type]** from the pop-up menu, as shown in the figure below.



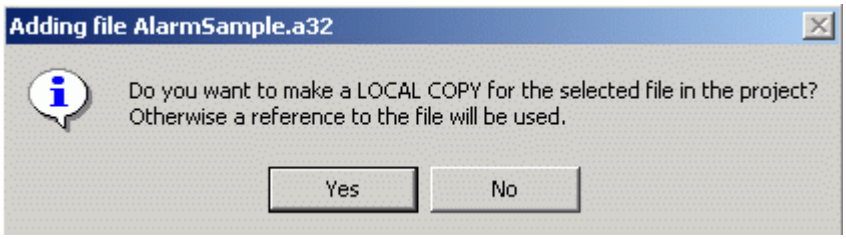
Adding an Existing Application File to a Project

2. In the **Add file** dialog box, choose a directory and a file to import, as shown in the figure below. Click **Open.**



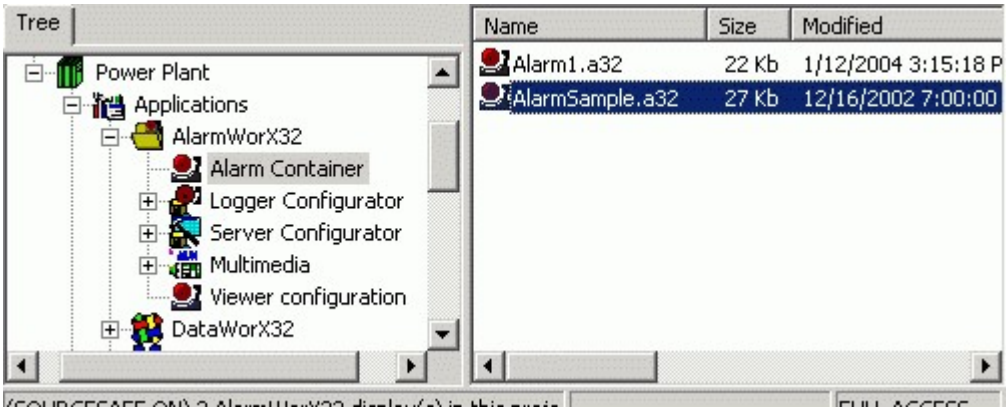
Choosing an Application File to Add to the Project

3. When you add an existing application file to a project, you can copy the file to the local project directory instead of running the file from its current location. To copy the file to the project folder, click **Yes** in the message box shown in the figure below. Otherwise click **No** to run the file from its current location; the file's directory path is referenced in the right-hand pane of the ProjectWorX console.



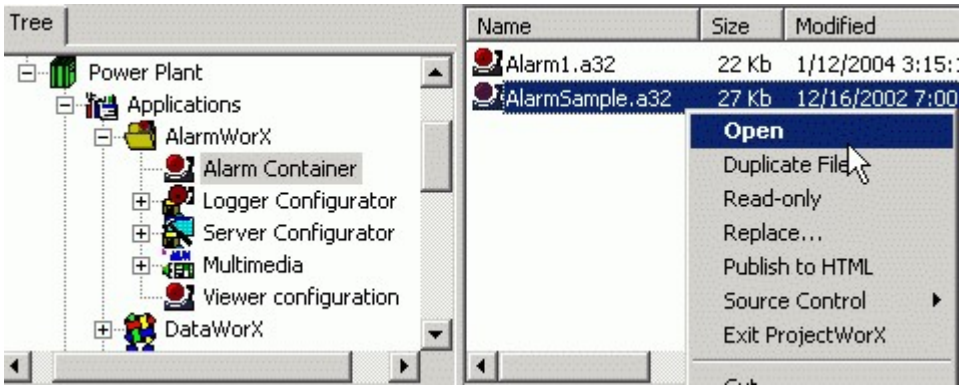
Copying the Application File Into the Project Folder

4. The file appears in the component tree (in this case Alarm Container) and is displayed in the right-hand pane of the ProjectWorX console, as shown in the figure below.



File Added to Application Component Tree in Project

5. To launch the application file, either double-click the file or right-click the file and select **Open** from the pop-up menu, as shown in the figure below.



Opening an Application File

Adding a SQL Server Configuration Database to a Project

ProjectWorX makes it possible to import configuration databases that reside inside Microsoft SQL Server databases. Several ProcessView applications, such as MobileHMI, AlarmWorX Multimedia, and ReportWorX, use SQL configuration databases. Universal Data Link (.udl) files are used to connect to the Microsoft SQL Server database.

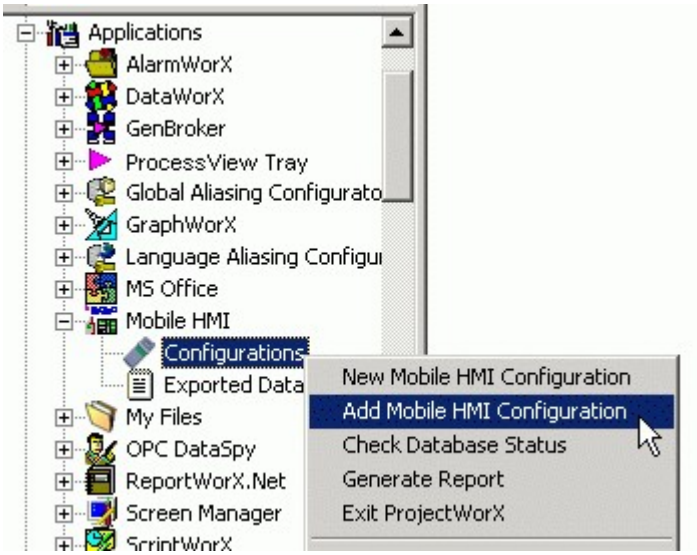
NOTE
Deleting a Microsoft SQL Server database configuration file from a project will delete it only from the project, not from SQL Server. (The .udl file will not be deleted as well.)

The following conditions apply to SQL Server configuration databases in ProjectWorX:

- ProjectWorX will not accept SQL Server configuration databases whose file names contain spaces because Microsoft SQL Server 2000 is not able to bulk export such databases.
- If a SQL configuration has dependent files (e.g. image files, sound files, etc.), these files will be packed along with the project automatically as referenced files.
- If ProjectWorX is used to perform certain operations on configurations while an instance of the configurator is open, a dialog box will be shown asking the user to close the configurator. ProjectWorX is blocked until the configurator is closed.
- Difference unpacking of projects will not work for SQL-based configurations. When unpacking SQL configuration files, all SQL configurations will not be overwritten even if the packed project contains newer files of the same name.
- ProjectWorX does not support direct check-in/check-out SQL databases to Microsoft Visual SourceSafe.

To add a SQL configuration database to a project:

1. Right-click the configuration tree and select **Add Configuration,** as shown in the figure below.



Adding a SQL Server Configuration Database

2. In the **Add UDL Files** dialog box, select a .udl file and click **Open** to add the configuration database to the current project.

3. The configuration database appears in the configurations subtree in the right-hand pane of the ProjectWorX console. The details view lists the following properties for the configuration database:

- **Configuration Database:** Name of the database
- **On Server:** Name of the SQL Server in which the database was created
- **Status:** The status of the database (could be normal, offline, etc)
- **Linked UDL File:** The path to the UDL file used to identify the database

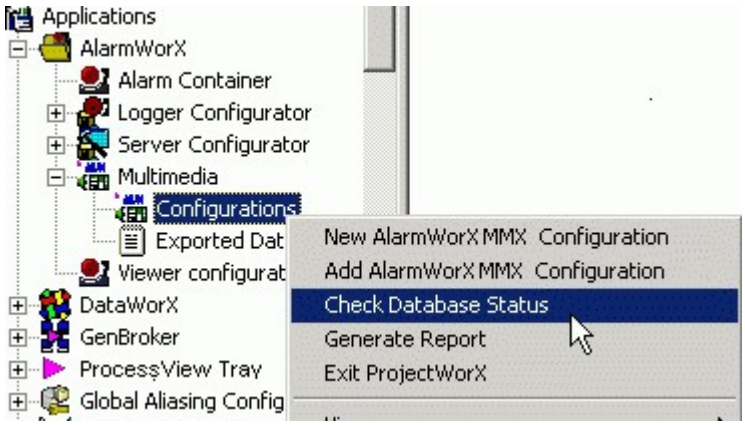
4. The new file appears in the right-hand pane of the ProjectWorX console, as shown in the figure below. If you right-click the file, the **Create UDL File** option is normally grayed out, as shown in the figure below. If the link to the .udl file is ever broken inside the ProjectWorX database, the **Create UDL File** option will become available and you will be able to create a new .udl file for the configuration.

Configuration File Added

Checking the Database Status

The **Check Database Status** option is useful for checking the status of all the Microsoft SQL Server databases added to the project. ProjectWorX does not poll SQL Server regularly to get the database status, so a "Normal" status will always be displayed even if the database is offline. By using the check status option, the list of databases will be refreshed and any eventual problem will be displayed.

To get the status of a SQL Server database, right-click and select **Check Database Status** from the pop-up menu, as shown in the figure below.



Checking the Database Status

The status of the database is indicated as follows:

- **Normal:** The database is online and ready
- **Missing:** The database is no longer on the server.
- **Offline:** The database is still on the server but is currently offline.
- **Recovering:** The database is recovering.
- **Loading:** The database is currently loading and will be available soon.
- **Suspect:** The database may have become corrupt.
- **Not Available:** An unknown error has occurred and the database is not available.

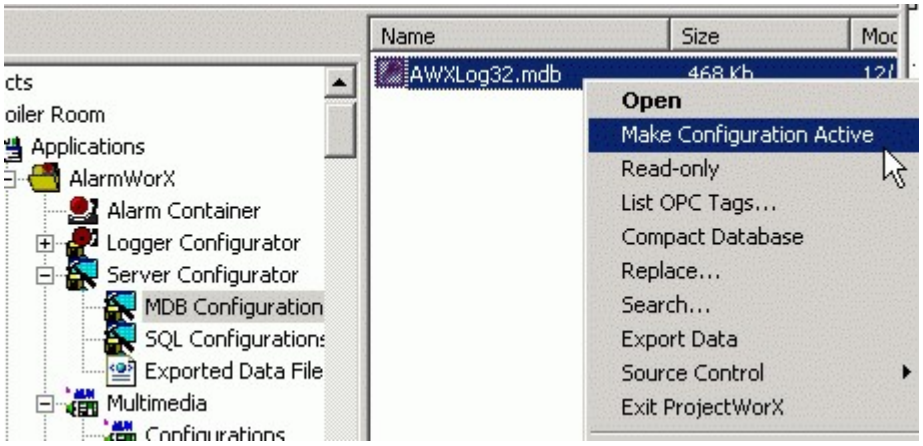
Activating Configuration Databases

Some application configurators (e.g. MobileHMI, Alarm Server, Alarm Logger, Alarm Multimedia, and Trend Logger) provide an option to specify an active configuration database.

NOTE
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX (e.g. with the MobileHMI Configurator) you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status.

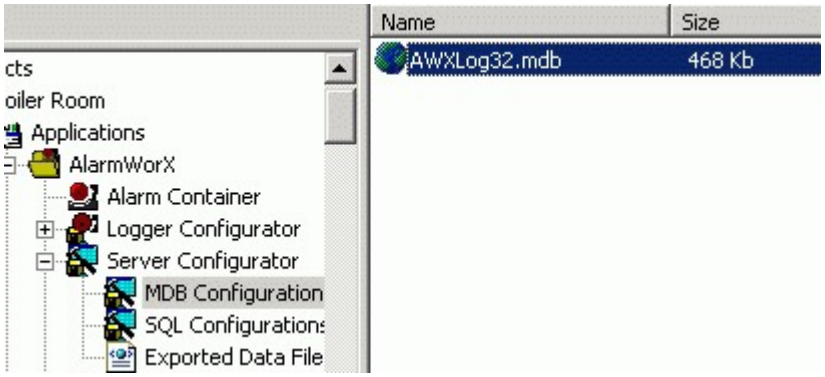
To activate a configuration database:

1. Right-click the configuration database and select **Make Configuration Active** from the pop-up menu, as shown in the figure below.



Specifying the Active Configuration Database

2. The icon next to the configuration file changes from the standard icon to a globe icon to indicate that it is active, as shown in the figure below.

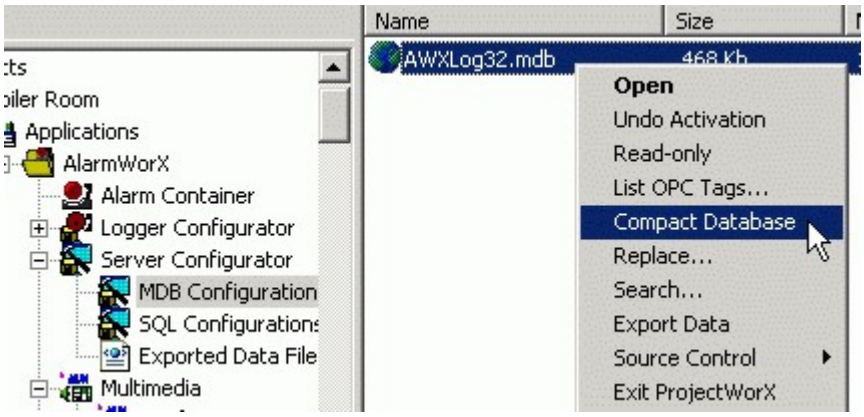


Configuration Database Activated

Compacting Microsoft Access Databases

Microsoft Access databases are subject to database fragmentation over time. In ProjectWorX, you can compact a Microsoft Access (.mdb) configuration database file in the project by simply right-clicking the .mdb file and selecting **Compact Database,** as shown in the figure below. Compacting reclaims unused space and drastically improves database performance.

NOTE
No users or client applications should be connected to the database at the time of compacting.



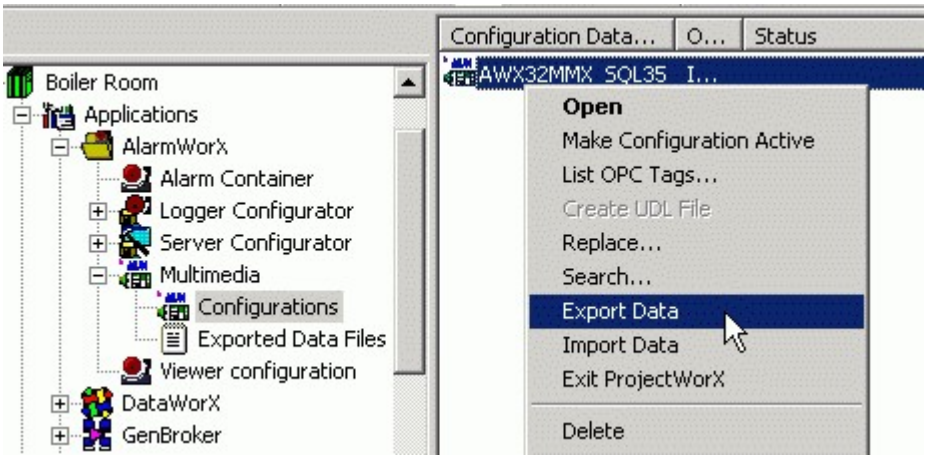
Compacting a Microsoft Access Database

Exporting and Importing Configuration Databases

ProjectWorX can perform the export and import options available in the various configurators, which allow you to export and import configuration databases to and from .csv and XML files.

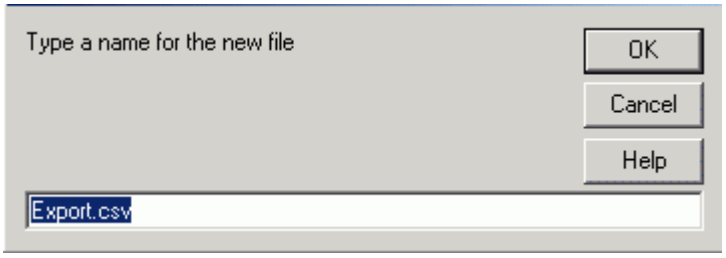
To export a configuration database file:

1. Right-click on the file and select **Export Data** from the pop-up menu, as shown in the figure below.



Exporting a Configuration Database

2. Type a name for the file, as shown in the figure below.



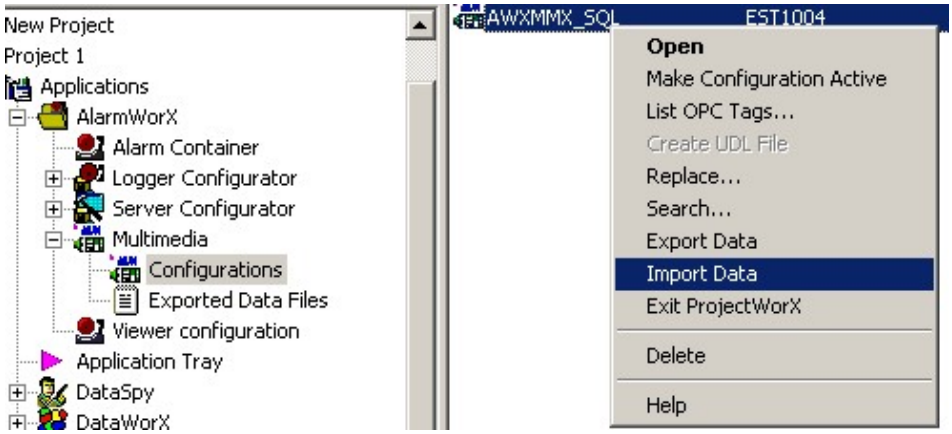
Naming the Exported File

3. When you export a configuration database to a .csv file or an XML file, the exported file is automatically placed in the **Exported Data Files** section, as shown in the figure below. This maintains any files exported from configurators. Furthermore, the **Exported Data Files** section supports functionality missing from the SQL configurations, such as SourceSafe behavior, file renaming, cut and paste, and duplication.

Exported Data File

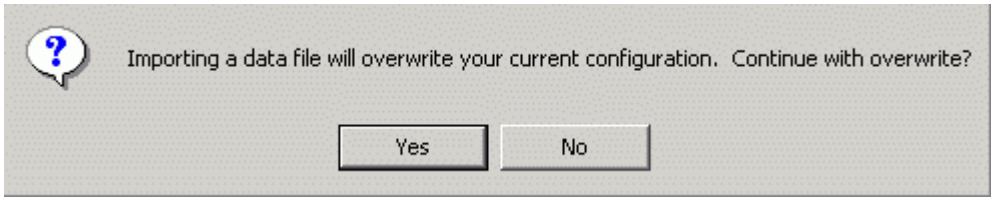
To import a .csv or XML file into an existing configuration database:

1. Right-click on the file and select **Import Data** from the pop-up menu, as shown in the figure below.



Importing a Configuration Database

2. A message appears warning you that the existing configuration will be overwritten, as shown in the figure below. To continue with the import, click **Yes.**



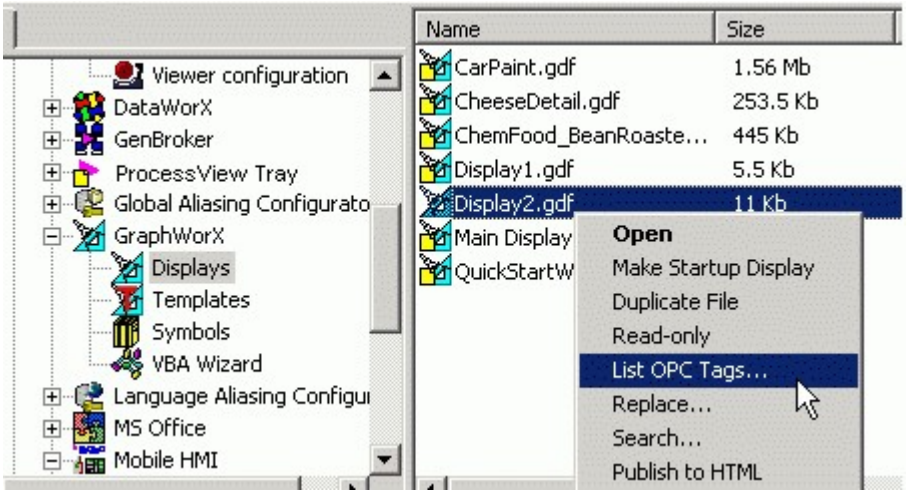
Warning Before Importing File

3. Browse for the .csv or XML file, and then click **Open** to start the import.

OPC Tag Verification

The ProjectWorX console includes a feature that lists all of the OPC tags that belong to certain files:

1. For example, right-click a GraphWorX display file in the ProjectWorX Console and select **List OPC Tags** from the pop-up menu, as shown in the figure below.



Opening the Tag Verification Utility

2. This opens the Tag Verification Utility, which lists all OPC tags contained within the display file. You can verify the status of tags in one of three ways:

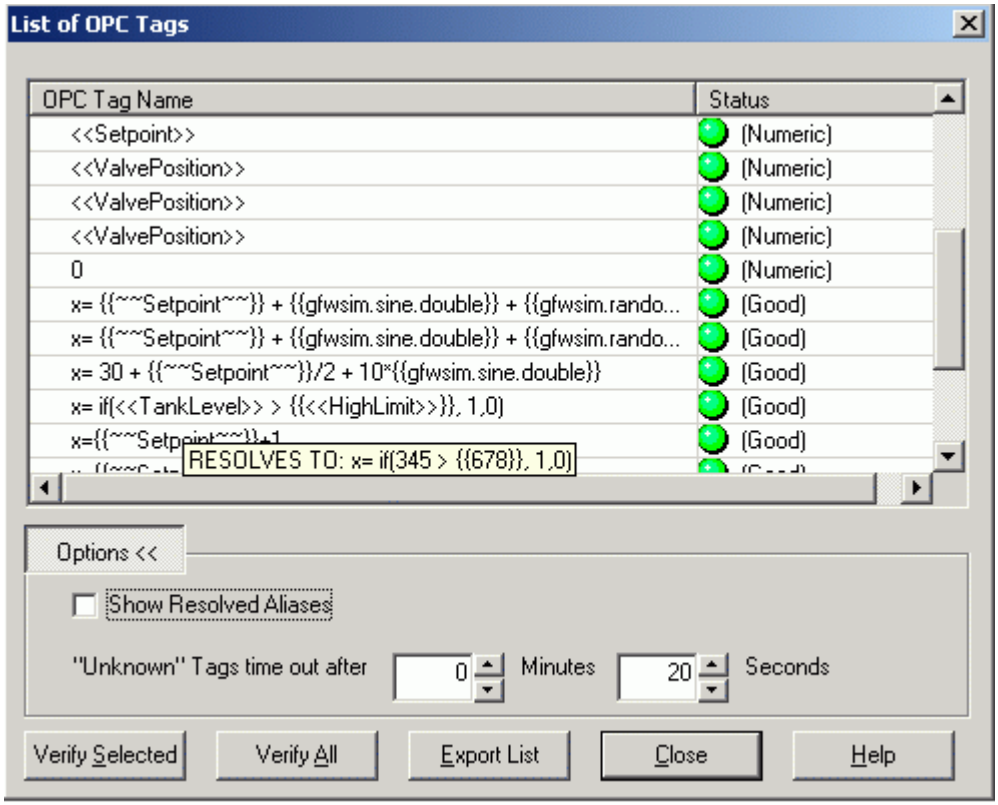
- Double-click a tag under **OPC Tag Name.**
- Select one or more tags under **OPC Tag Name** and click the **Verify Selected** button.

- Click the **Verify All** button to check the status of all tags in the display file.
- Click **Export List** to export the data to a text file.

Each of the tags selected for verification shows an indicator of good (green), bad (red), or uncertain (yellow) as a form of verification, as shown in the figure below.

Clicking the **Options** button exposes some additional features, as shown in the figure below:

- The **Show Resolved Aliases** check box is only enabled if one or more item is an alias or has an alias embedded inside itself. If the check box is left unchecked, each item is shown exactly how it appears in configuration mode in GraphWorX. While in this mode, moving the mouse oven an item in the list will show a ToolTip displaying the value to which the aliased tag resolves. If the **Show Resolved Aliases** check box checked, then the items in the list will be displayed with their aliases resolved, and the ToolTip text will show the tag as it appears in the GraphWorX display configuration.
- The additional option has been added to set a timeout for tags that are in an "uncertain" (yellow) state. If a tag is yellow for the specified amount of time, it will be changed to a "timed out" state (red). This behavior has been implemented because tags are not released (are taking up client units) as long as they are in the "uncertain" state. When the tag times out, it is immediately released. In order to simplify the task of checking the validity of tags, items that are strings or numeric constants (or aliases resolving to strings or numeric constants) are immediately set to a "string" or "numeric" state (green) as there is no need for further verification.

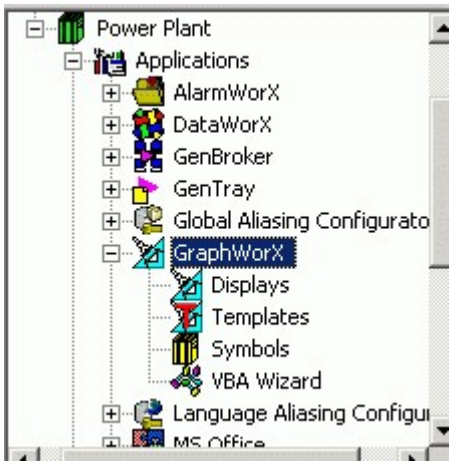


Verifying OPC Tags

GraphWorX Tree

The **GraphWorX** tree in the ProjectWorX console, shown in the figure below, manages files for the following GraphWorX components:

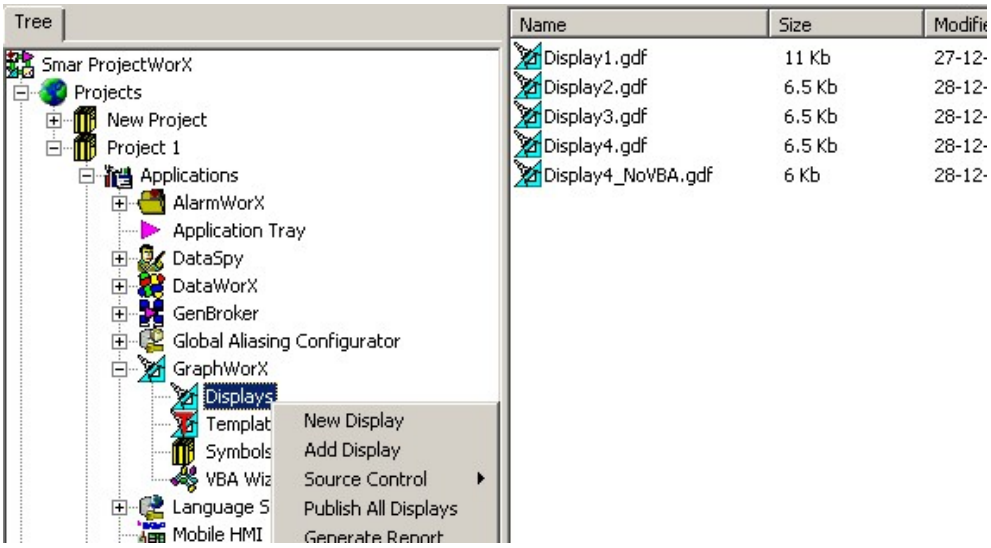
- Displays
- Templates
- Symbols
- VBA Wizards



GraphWorX Tree in ProjectWorX Console

GraphWorX Displays

The **Displays** subtree component of the GraphWorX tree in the ProjectWorX console, shown in the figure below, includes all the GraphWorX display files available for a project. From here you can right-click and create new GraphWorX display files or add existing display files to the project.

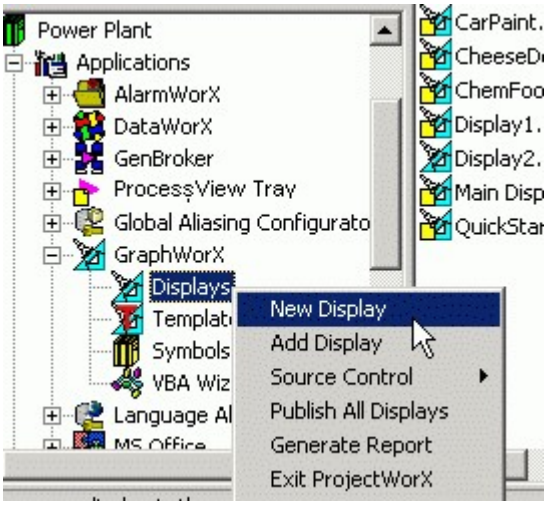


GraphWorX Displays Subtree

Creating a New GraphWorX Display File

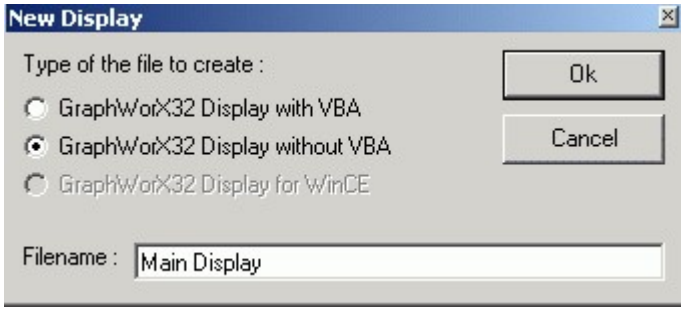
To create a new GraphWorX display file in the ProjectWorX console:

1. Right-click **Displays** in the **GraphWorX** tree and select **New Display** from the pop-up menu, as shown in the figure below.



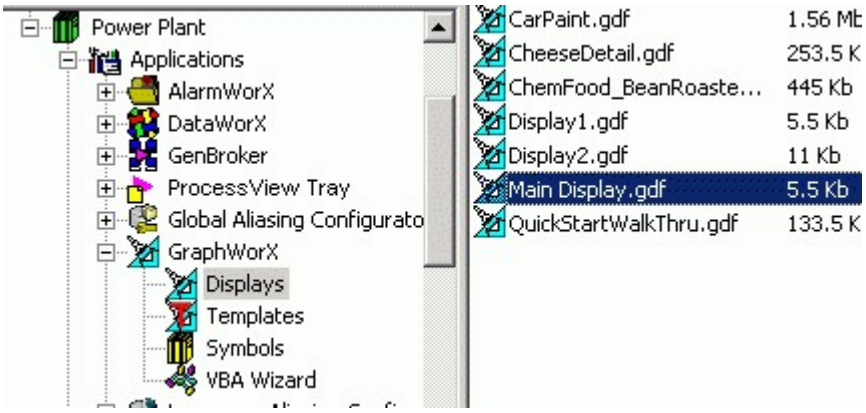
Creating a New GraphWorX Display File

2. Choose the type of display to create (e.g. with VBA or without VBA), and give the new file a name, as shown in the figure below. Click **OK.**



Naming the New Display File

3. The new file appears in the Displays subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below. ProjectWorX automatically launches the new file in GraphWorX.

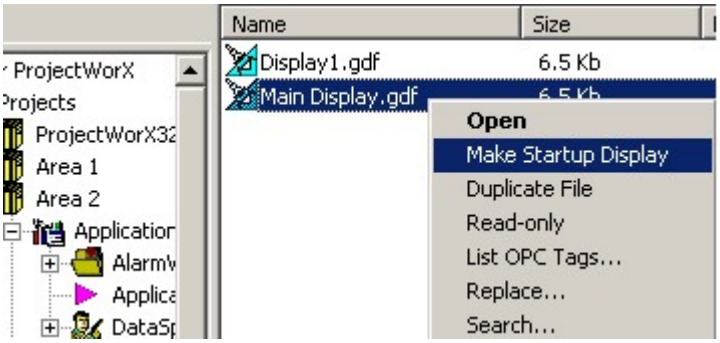


New Display File Added to GraphWorX Display Tree

Specifying a GraphWorX Startup Display File

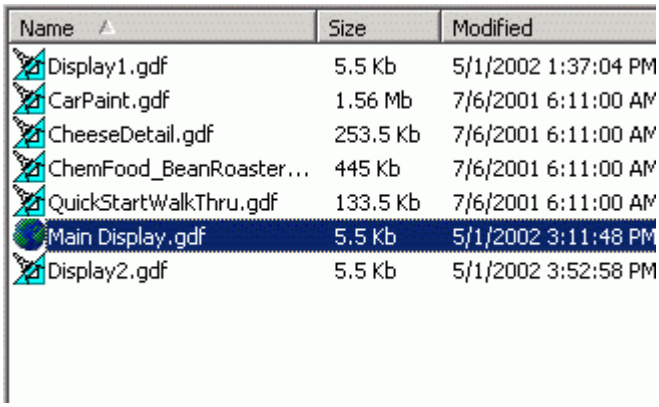
The GraphWorX Display tree provides an option to specify a startup display that automatically opens when GraphWorX is started from ProcessView Tray. To specify a GraphWorX display file as the startup display in the ProjectWorX console:

1. Right-click the display file (e.g. "Main Display.gdf") and select **Make Startup Display** from the pop-up menu, as shown in the figure below.



Specifying a GraphWorX Startup Display

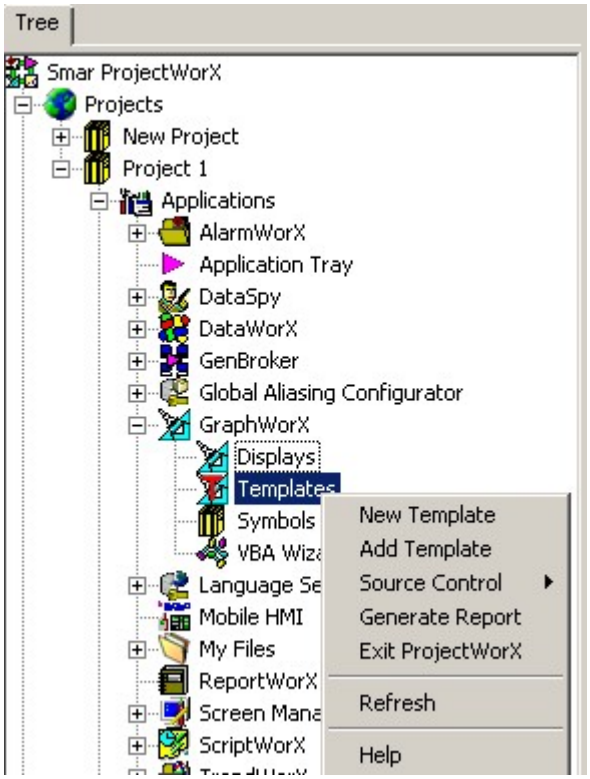
2. The icon next to the display file changes from the standard GraphWorX icon to a globe icon, as shown in the figure below. The next time GraphWorX is launched from the ProcessView Tray, the startup display will automatically open in GraphWorX.



Startup Display Indicated in GraphWorX Display Tree

GraphWorX Templates

The **Templates** subtree component of the GraphWorX tree in the ProjectWorX console, shown in the figure below, includes all the GraphWorX template files available for a project. From here you can right-click and create new GraphWorX template files or add existing template files to the project.

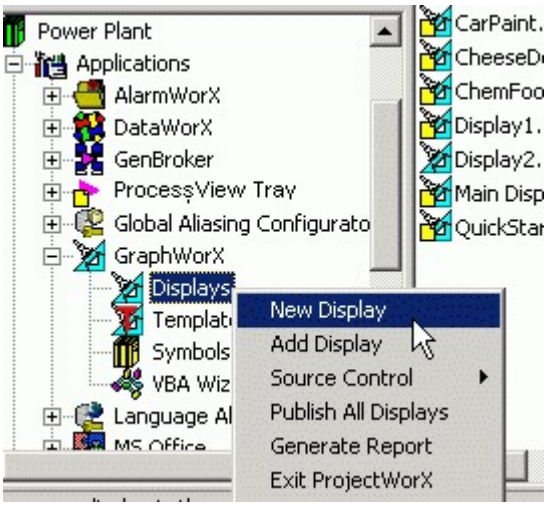


GraphWorX Templates Subtree

Creating a New GraphWorX Template File

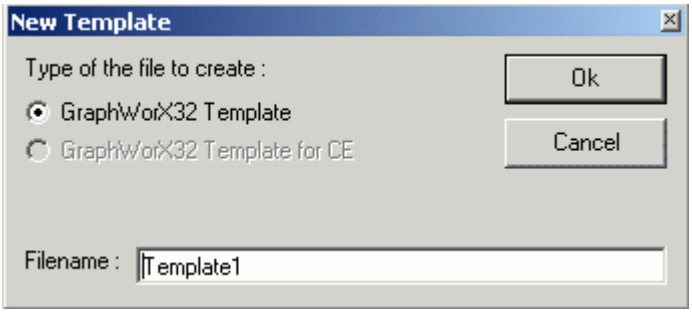
To create a new GraphWorX template file in the ProjectWorX console:

1. Right-click **Templates** in the **GraphWorX** tree and select **New Template** from the pop-up menu, as shown in the figure below.



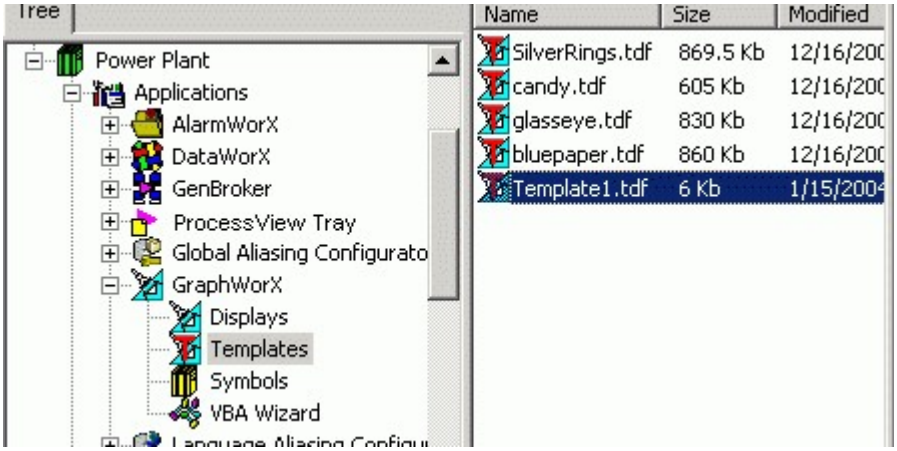
Creating a New GraphWorX Template File

2. Choose the type of template to create, and give the new file a name, as shown in the figure below. Click **OK.**



Naming the New File

3. The new file appears in the Templates subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below. ProjectWorX automatically launches the new file in GraphWorX.



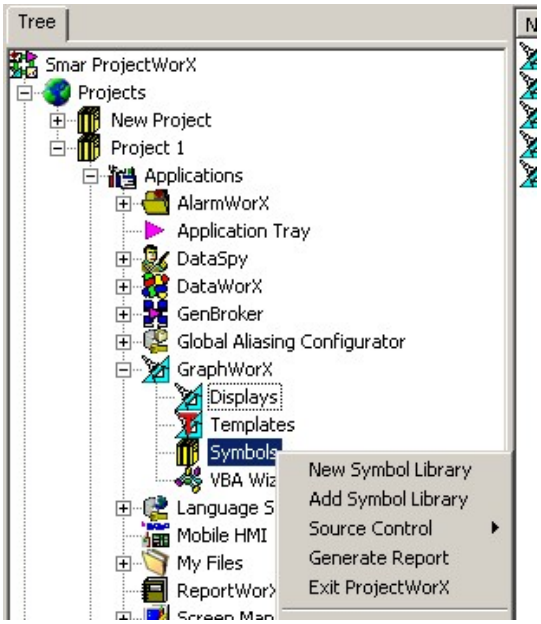
New File Added to GraphWorX Templates Subtree

GraphWorX Symbols

The **Symbols** subtree component of the GraphWorX tree in the ProjectWorX console, shown in the figure below, includes all the GraphWorX Symbol Library files available for a project. From here you can right-click and add existing Symbol Library files to the project, as well as add new symbols.

The way ProjectWorX handles Symbol Library files differs slightly from that of other file types. The Symbol Library files, which are usually used from within GraphWorX, are by default placed in the **Smar\ProcessView\Symbols** directory created when ProcessView is installed. However, it is possible to have Symbols Library files in other locations on the hard drive; ProjectWorX simply references the files from that location.

NOTE
When unpacking a project, ProjectWorX automatically distinguishes between Symbol Library files located in the **Smar\ProcessView\Symbols** folder and Symbol Library files located in other directories. Therefore ProjectWorX handles these files with the necessary care, placing them back in the proper location and prompting the user before overwriting existing files.

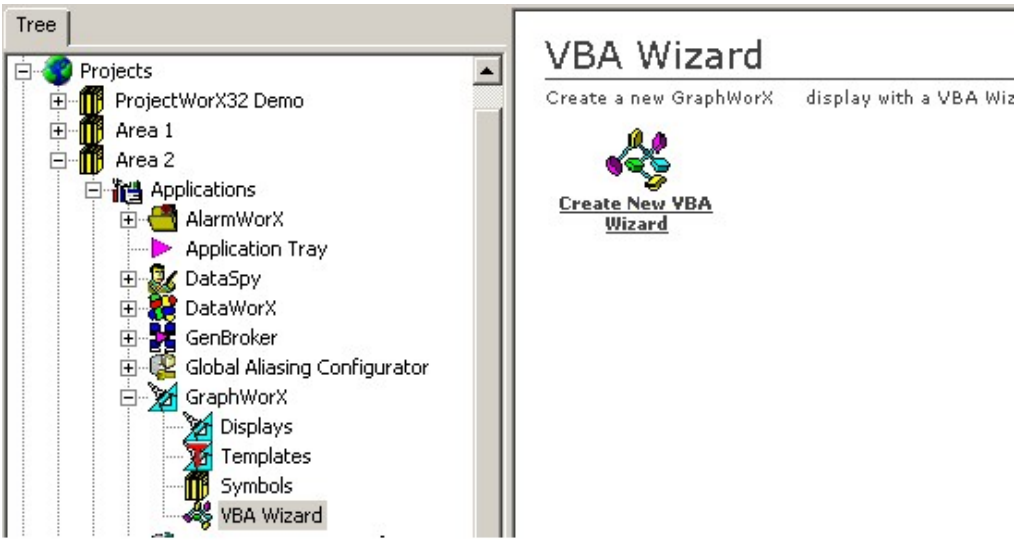


GraphWorX Symbols Subtree

GraphWorX VBA Wizard

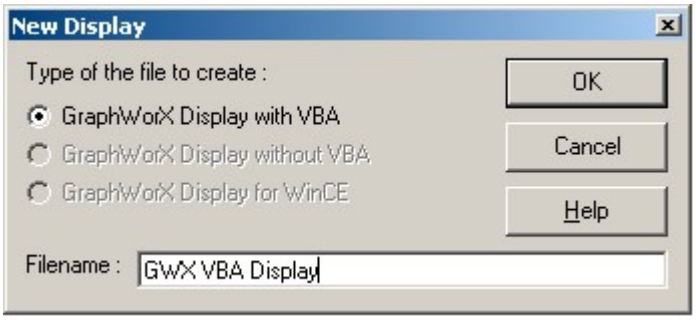
The **VBA Wizard** subtree component of the GraphWorX tree in the ProjectWorX console, shown in the figure below, allows you to create a new display with a Microsoft Visual Basic for Applications (VBA) Wizard.

1. Click on the **Create New VBA Wizard** icon, as shown in the figure below.



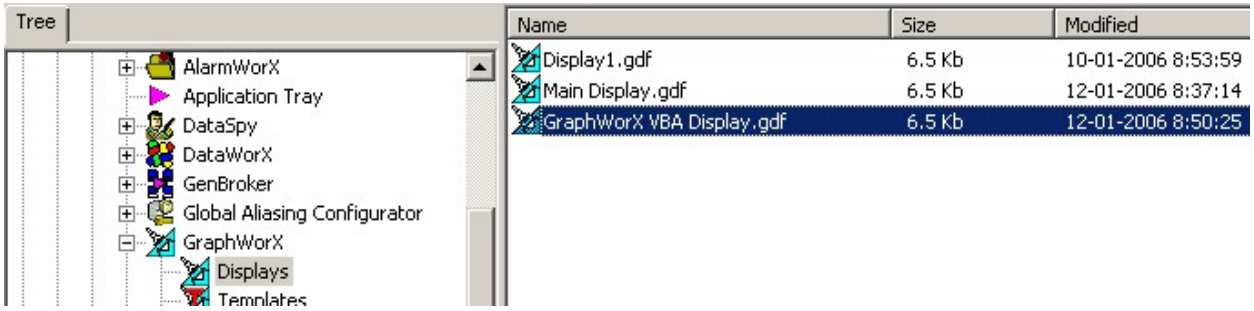
GraphWorX VBA Wizard Subtree

2. Give the new file a name, as shown in the figure below, and then click **OK.**



Creating a New GraphWorX VBA Display

3. ProjectWorX automatically launches the new display file in GraphWorX, opening the Symbol Library as well. The new VBA file appears in the Displays subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below.

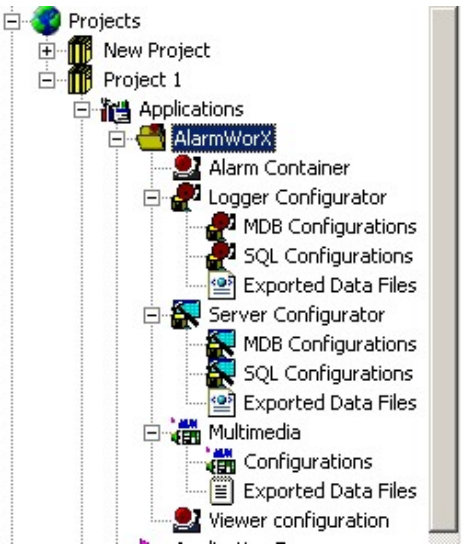


New VBA Display File Added to GraphWorX Display Tree

AlarmWorX Tree

The **AlarmWorX** tree in the ProjectWorX console, shown in the figure below, manages files for the following AlarmWorX components:

- Alarm Container
- Logger Configurator
- Server Configurator
- Multimedia Configurator
- Viewer Configuration



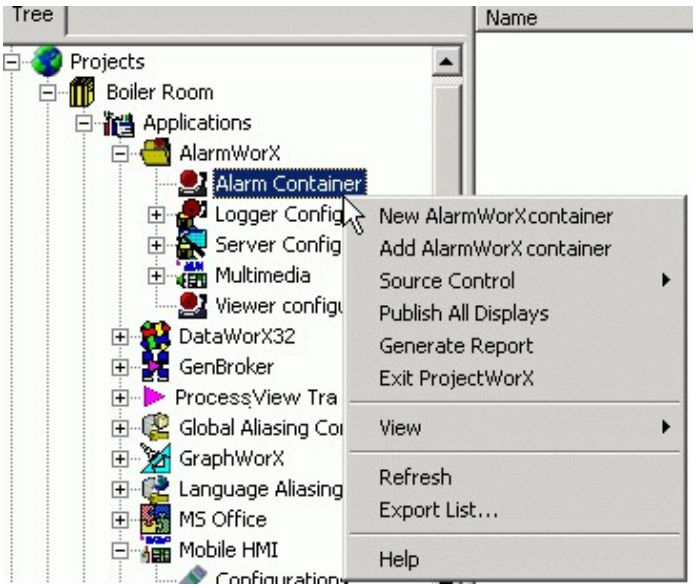
AlarmWorX Tree in ProjectWorX Console

The Alarm container files are handled with the basic operations to create, add, duplicate, etc. The AlarmWorX Logger Configurator, Server Configurator, and Multimedia Configurator are handled a bit differently. The Logger and Server support both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. AlarmWorX Multimedia only supports Microsoft SQL Server (or MSDE) databases.

NOTE
Configuration files that use Microsoft Access databases cannot be renamed or duplicated in ProjectWorX. If you want to rename or duplicate the configuration file, you should do it within the appropriate configurator application.

AlarmWorX Container

The **Alarm Container** subtree of the AlarmWorX tree in the ProjectWorX console, shown in the figure below, includes all the AlarmWorX container files available for a project. From here you can right-click and create new files or add existing files to the project.



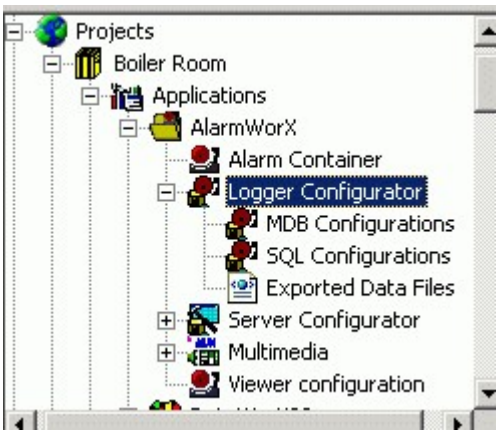
Alarm Container Subtree

Alarm Logger Configurator

The **Alarm Logger Configurator** subtree of the AlarmWorX tree in the ProjectWorX console, shown in the figure below, includes all the AlarmWorX Logger configuration database files available for a project. From here you can right-click and create new configuration databases or add existing configuration databases to the project. You can also activate the database. When you create a new SQL Server database, ProjectWorX launches the **Configuration Database Wizard,** which will help you create a new configuration database.

The Alarm Logger Configurator supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. For more information about SQL databases, please see "Adding a SQL Server Configuration Database to a Project."

NOTES
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status. For complete information about creating and configuring Alarm Logger databases, please refer to the Alarm Logger Configurator Help documentation.



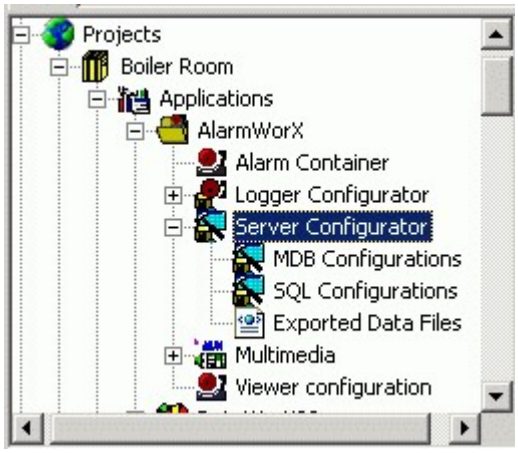
Alarm Logger Configurator Subtree

Alarm Server Configurator

The **Alarm Server Configurator** subtree of the AlarmWorX tree in the ProjectWorX console, shown in the figure below, includes all the AlarmWorX Server configuration database files available for a project. From here you can right-click and create new configuration databases or add existing configuration databases to the project. You can also activate the database. When you create a new SQL Server database, ProjectWorX launches the **Configuration Database Wizard,** which will help you create a new configuration database.

The Alarm Server Configurator supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. For more information about SQL databases, please see "Adding a SQL Server Configuration Database to a Project."

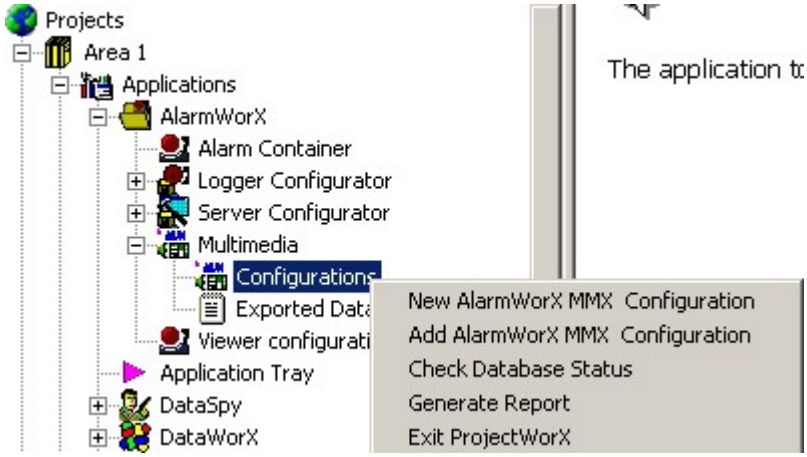
NOTES
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status. For complete information about creating and configuring Alarm Server databases, please refer to the Alarm Server Configurator Help documentation.



Alarm Server Configurator Subtree

Multimedia Configurator

The **Multimedia Configurator** tree in the ProjectWorX console, shown in the figure below, manages AlarmWorX Multimedia configuration databases. The Multimedia Configurator uses Microsoft SQL Server databases, and it uses Universal Data Link (.udl) files to connect to the Microsoft SQL Server databases. These .udl files contain OLE database connection information that allows the Configurator to create and manage connections to OLE databases. You can also activate the database.



Multimedia Configurator Subtree

NOTE
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status.

The following conditions apply to SQL Server configuration databases in ProjectWorX:

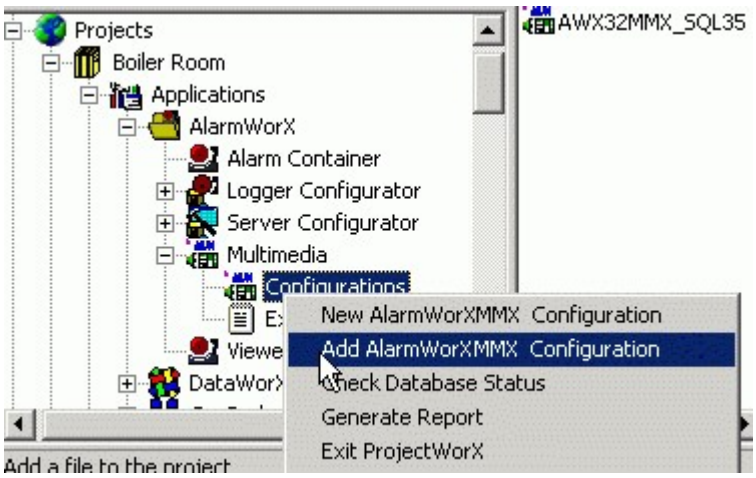
- ProjectWorX will not accept SQL Server configuration databases whose file names contain spaces because Microsoft SQL Server 2000 is not able to bulk export such databases.
- If a SQL configuration has dependent files (e.g. image files, sound files, etc.), these files will be packed along with the project automatically as referenced files.
- If ProjectWorX is used to perform certain operations on configurations while an instance of the configurator is open, a dialog box will be shown asking the user to close the configurator. ProjectWorX is blocked until the configurator is closed.

- Difference unpacking of projects will not work for SQL-based configurations. When unpacking SQL configuration files, all SQL configurations will not be overwritten even if the packed project contains newer files of the same name.
- ProjectWorX does not support direct check-in/check-out SQL databases to Microsoft Visual SourceSafe.

Adding a Multimedia Configuration Database

To add a Multimedia SQL configuration database to a project:

1. Right-click the configuration tree and select **Add AlarmWorX MMX Configuration,** as shown in the figure below.



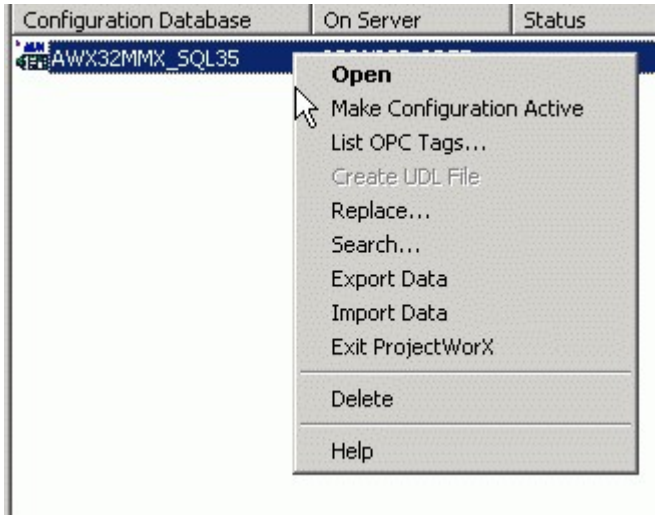
Adding a Multimedia SQL Server Configuration Database

2. In the **Add UDL Files** dialog box, select a .udl file and click **Open** to add the configuration database to the current project.

3. The configuration database appears in the configurations subtree in the right-hand pane of the ProjectWorX console. The details view lists the following properties for the configuration database:

- **Configuration Database:** Name of the database
- **On Server:** Name of the SQL Server in which the database was created
- **Status:** The status of the database (could be normal, offline, etc)
- **Linked UDL File:** The path to the UDL file used to identify the database

4. The new file appears in the right-hand pane of the ProjectWorX console. If you right-click the file, the **Create UDL File** option is normally grayed out, as shown in the figure below. If the link to the .udl file is ever broken inside the ProjectWorX database, the **Create UDL File** option will become available and you will be able to create a new .udl file for the configuration.



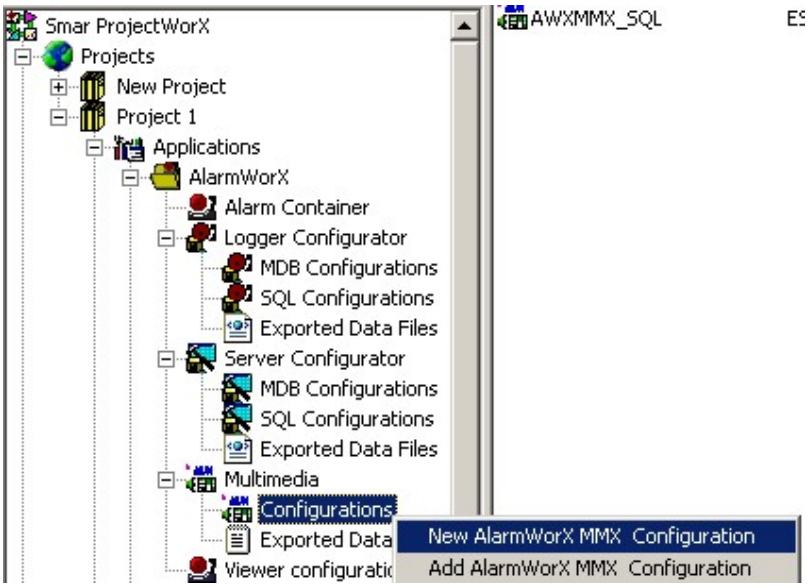
SQL Database File Added to AlarmWorX Multimedia Configuration

NOTE
Deleting a Microsoft SQL Server database configuration file from a project will delete it only from the project, not from SQL Server. (The .udl file will not be deleted as well.)

Creating a New Multimedia SQL Configuration Database

To create a new Multimedia configuration database in the ProjectWorX console:

1. Right-click the **Configurations** subtree in the **Multimedia Configurator** tree and select **New AlarmWorX MMX Configuration** from the pop-up menu, as shown in the figure below.



Creating a New Multimedia Configuration Database

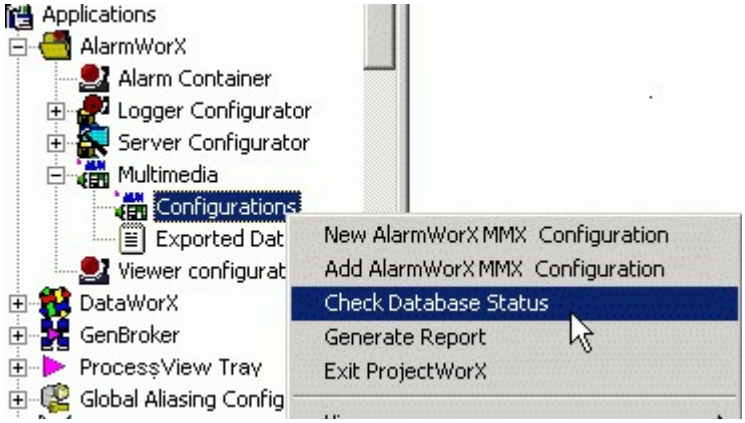
2. ProjectWorX launches the **Multimedia Configuration Database Wizard,** which will help you create a new configuration database.

NOTE
For complete information about creating and configuring Multimedia databases, please refer to the AlarmWorX Multimedia Configurator Help documentation.

Checking the Database Status

The **Check Database Status** option is useful for checking the status of all the Microsoft SQL Server databases added to the project. ProjectWorX does not poll SQL Server regularly to get the database status, so a "Normal" status will always be displayed even if the database is offline. By using the check status option, the list of databases will be refreshed and any eventual problem will be displayed.

To get the status of a SQL Server database, right-click and select **Check Database Status** from the pop-up menu, as shown in the figure below.



Checking the Database Status

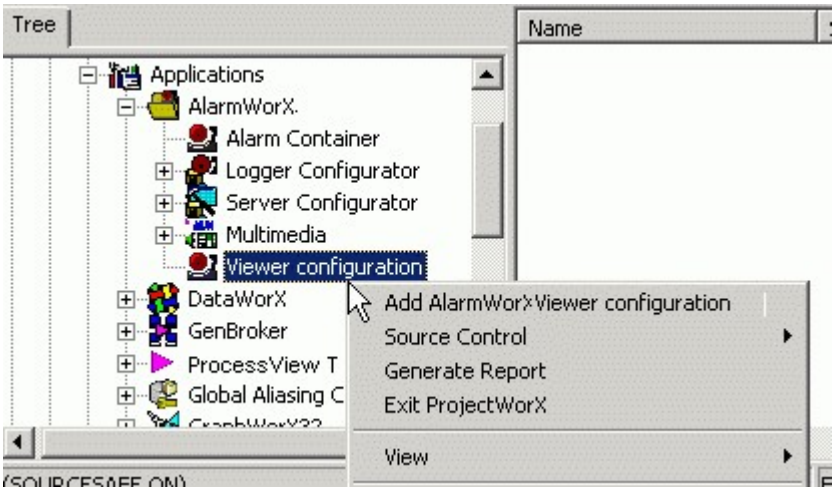
The status of the database is indicated as follows:

- **Normal:** The database is online and ready
- **Missing:** The database is no longer on the server.
- **Offline:** The database is still on the server but is currently offline.
- **Recovering:** The database is recovering.
- **Loading:** The database is currently loading and will be available soon.
- **Suspect:** The database may have become corrupt.
- **Not Available:** An unknown error has occurred and the database is not available.

AlarmWorX Viewer

ProjectWorX includes support for publishing AlarmWorX container files (.a32). Unlike publishing GraphWorX displays, publishing alarm files has the side effect of creating intermediate .awv files. It is actually these files, and not the container files, that are referenced by the created HTML page. These files are contained in the **AlarmWorX Viewer Configuration** tree, shown in the figure below. After the Web Publishing Wizard has been executed, these generated intermediate files are automatically added to these two trees. This is critical for ProjectWorX's ability to publish local HTML files with the intention of later publishing the HTML files from the local folders to a Web Site.

The **Viewer Configuration** subtree of the AlarmWorX tree in the ProjectWorX console, shown in the figure below, includes all the AlarmWorX Viewer files available for a project. From here you can also right-click and add existing files to the project.

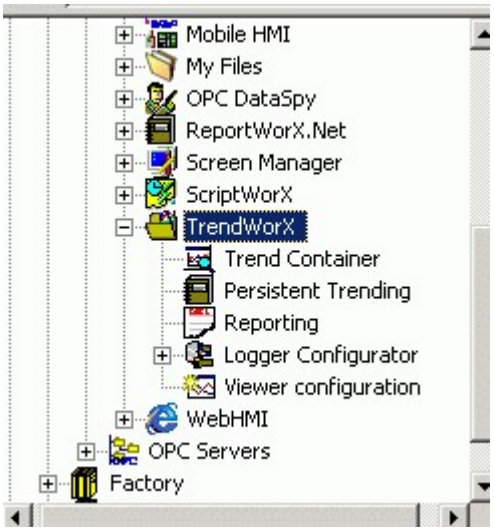


Alarm Viewer Configuration Subtree

TrendWorX Tree

The **TrendWorX** tree in the ProjectWorX console, shown in the figure below, manages files for the following TrendWorX components:

- Trend Container
- Persistent Trending
- Reporting
- Logger Configurator
- Viewer Configuration

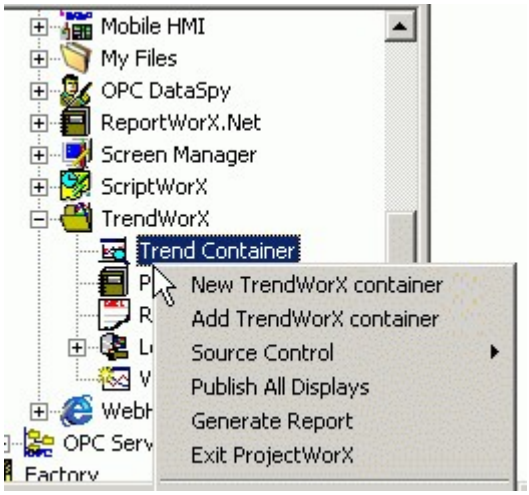


TrendWorX Tree in ProjectWorX Console

The Trend container, Persistent Trending, and Reporting files are handled with the basic operations to create, add, duplicate, etc. The Logger supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases.

TrendWorX Container

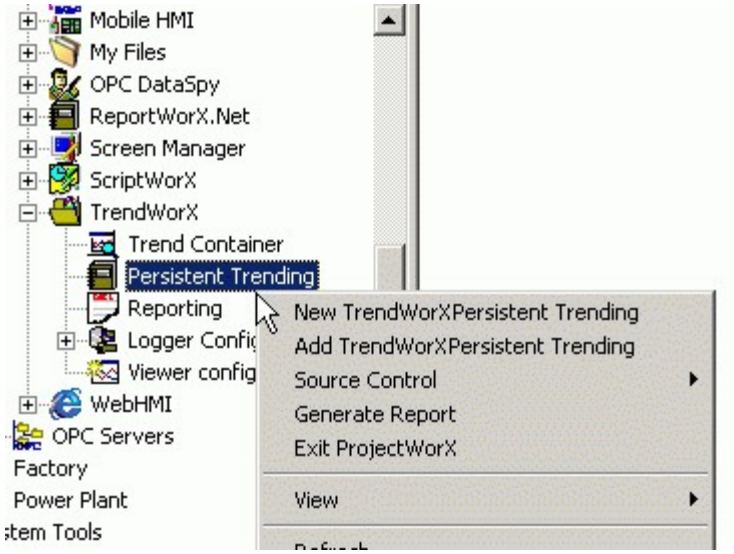
The **Trend Container** subtree of the TrendWorX tree in the ProjectWorX console, shown in the figure below, includes all the TrendWorX container files available for a project. From here you can right-click and create new files or add existing files to the project.



Trend Container Subtree

TrendWorX Persistent Trending

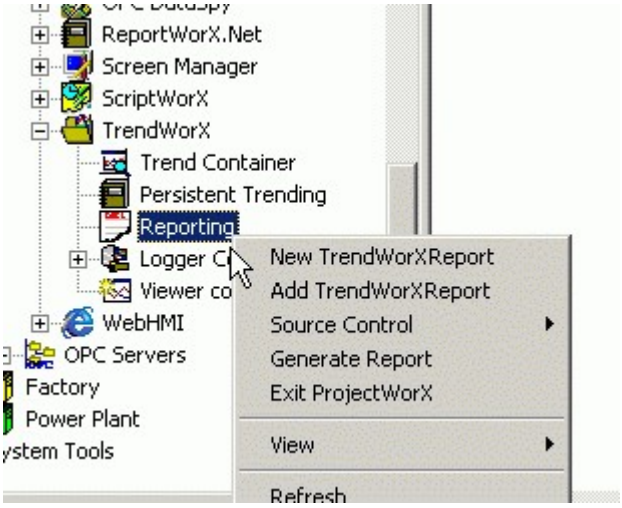
The **Persistent Trending** subtree of the TrendWorX tree in the ProjectWorX console, shown in the figure below, includes all the TrendWorX Persistent Trending files available for a project. From here you can right-click and create new files or add existing files to the project.



TrendWorX Persistent Trending Subtree

TrendWorX Reporting

The **Reporting** subtree of the TrendWorX tree in the ProjectWorX console, shown in the figure below, includes all the TrendWorX Reporting files available for a project. From here you can right-click and create new files or add existing configuration files to the project.



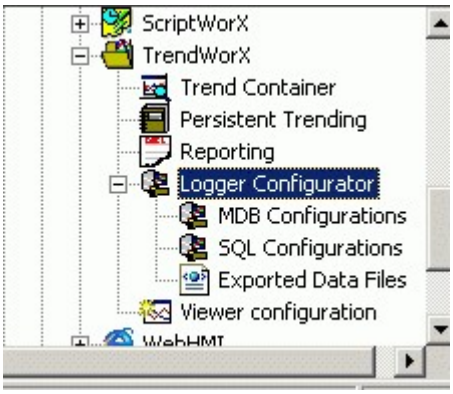
TrendWorX Reporting Subtree

TrendWorX Logger Configurator

The **Logger Configurator** subtree of the TrendWorX tree in the ProjectWorX console, shown in the figure below, includes all the TrendWorX Logger configuration database files available for a project. From here you can right-click and create new configuration databases or add existing configuration databases to the project. You can also activate the database.

The TrendWorX Logger Configurator supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. When you create a new SQL Server database, ProjectWorX launches the **Configuration Database Wizard,** which will help you create a new configuration database.

NOTE
For complete information about creating and configuring Alarm Logger databases, please refer to the Trend Logger Configurator Help documentation.



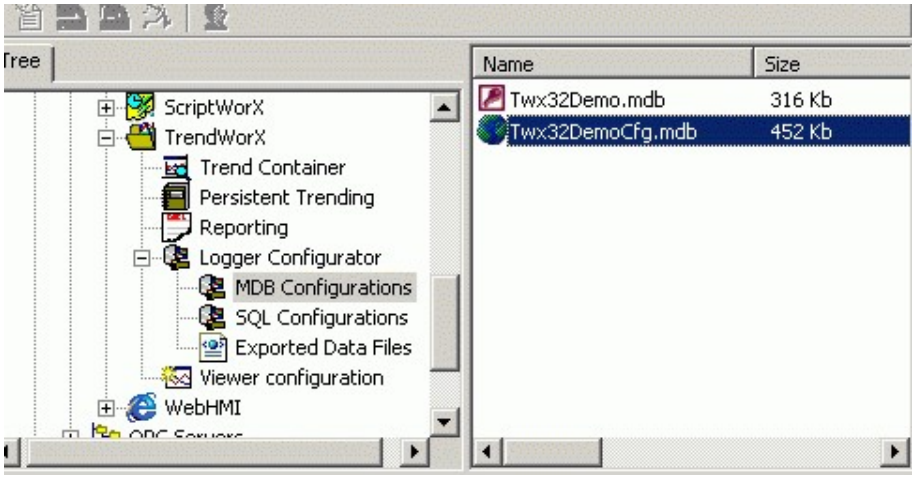
TrendWorX Logger Configurator Subtree

Activating TrendWorX Logger Configuration Databases

To activate a TrendWorX Logger configuration database:

1. Right-click the file and select **Make Configuration Active** from the pop-up menu.

2. The icon next to the configuration file changes from the standard icon to a globe icon to indicate that it is active, as shown in the figure below.



Selecting a TrendWorX Database to Activate

TrendWorX Viewer

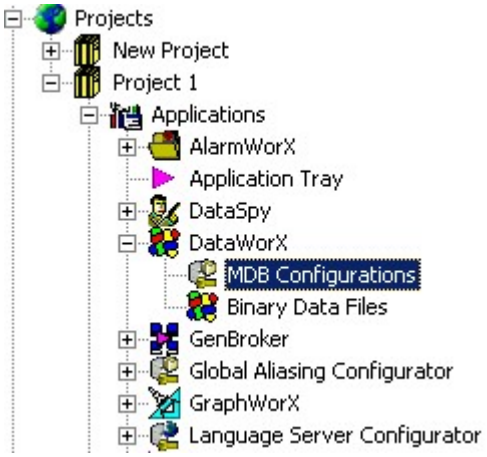
ProjectWorX includes support for publishing TrendWorX container files (.t32). Unlike publishing GraphWorX displays, publishing trend files has the side effect of creating intermediate .v32 files. It is actually these files, and not the container files, that are referenced by the created HTML page. These files are contained in the **TrendWorX Viewer Configuration** tree, shown in the figure below. After the Web Publishing Wizard has been executed, these generated intermediate files are automatically added to these two trees. This is critical for ProjectWorX's ability to publish local HTML files with the intention of later publishing the HTML files from the local folders to a Web Site.

The **Viewer Configuration** subtree of the TrendWorX tree in the ProjectWorX console, shown in the figure below, includes all the TrendWorX Viewer files available for a project. From here you can also right-click and add existing files to the project.

Trend Viewer Configuration Subtree

DataWorX Tree

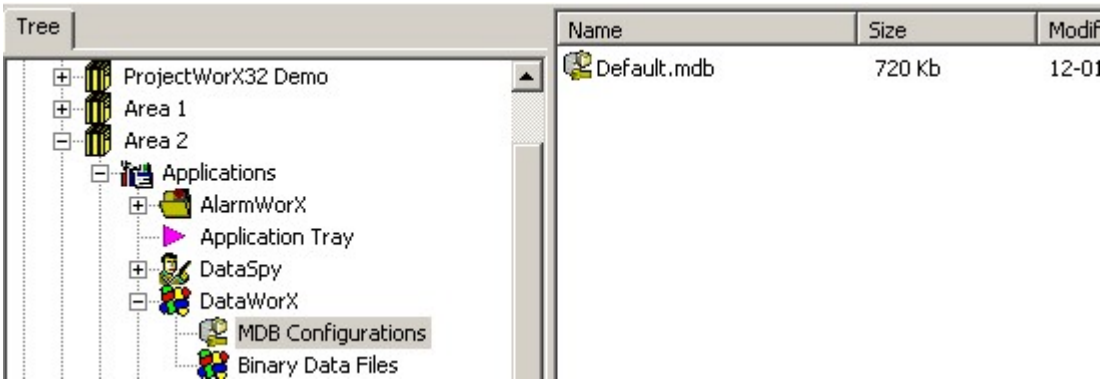
The **DataWorX** tree in the ProjectWorX console, shown in the figure below, includes all the DataWorX files available for a project.



DataWorX Tree in ProjectWorX Console

DataWorX Projects

In the **DataWorX Projects** subtree of the DataWorX tree in the ProjectWorX console, you can right-click and create new configuration databases or add existing configuration databases and binary files to the project. You can also specify a startup project.

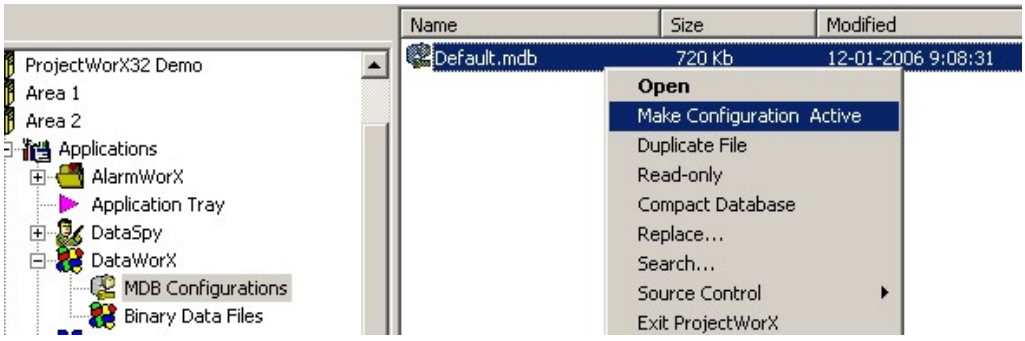


DataWorX Projects Subtree

Specifying a DataWorX Active Configuration

The **MDB Configurations** subtree of the DataWorX tree provides an option to specify an active configuration database.

To activate a DataWorX configuration database, right-click the project file and select **Make Configuration Active** from the pop-up menu, as shown in the figure below.



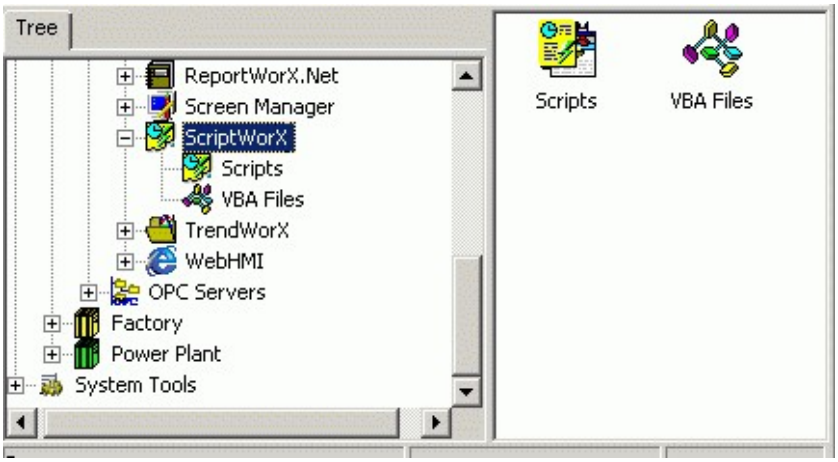
Activating a DataWorX Configuration Database

ScriptWorX Tree

The **ScriptWorX** tree in the ProjectWorX console, shown in the figure below, manages files for the following ScriptWorX components:

- Scripts
- VBA Files

Although you can view all the files that pertain to a script (i.e. the .swx files as well as the .vba files with the same name that are automatically created when making a new script), the ScriptWorX (.swx) files are the only files that you can really access through the ProjectWorX console. Each .swx file has a corresponding .vba file. A .vba file without a .swx file would be of no use in this environment, so in ProjectWorX these two file types are always connected to each other. This prevents confusion and avoids deleting or creating .vba files not connected to any script (.swx) file.

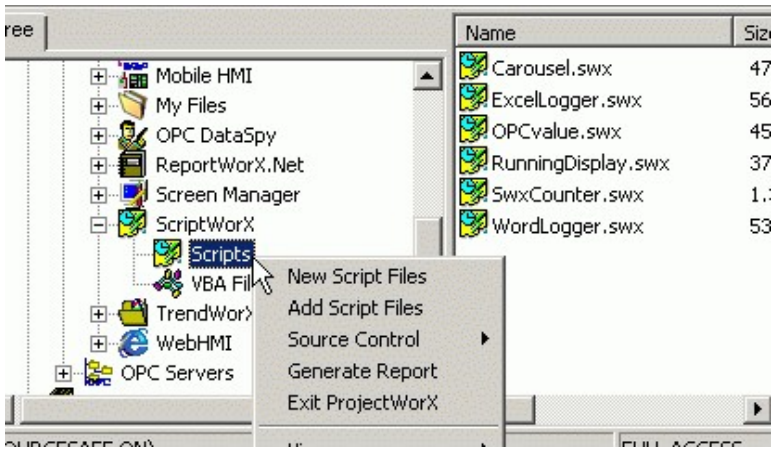


ScriptWorX Tree in ProjectWorX Console

ScriptWorX Scripts

The **Scripts Container** subtree of the ScriptWorX tree in the ProjectWorX console, shown in the figure below, includes all the ScriptWorX script (*.swx) files available for a project. From here you can right-click and create new scripts or add existing scripts to the project.

NOTE
Each .swx file has a corresponding .vba file. The .vba files that correspond to .swx files are stored in the **VBA Files** subtree. When you create, rename, delete, or activate a .swx script file, the .vba file that corresponds to the .swx file will also be created, renamed, deleted, or activated.

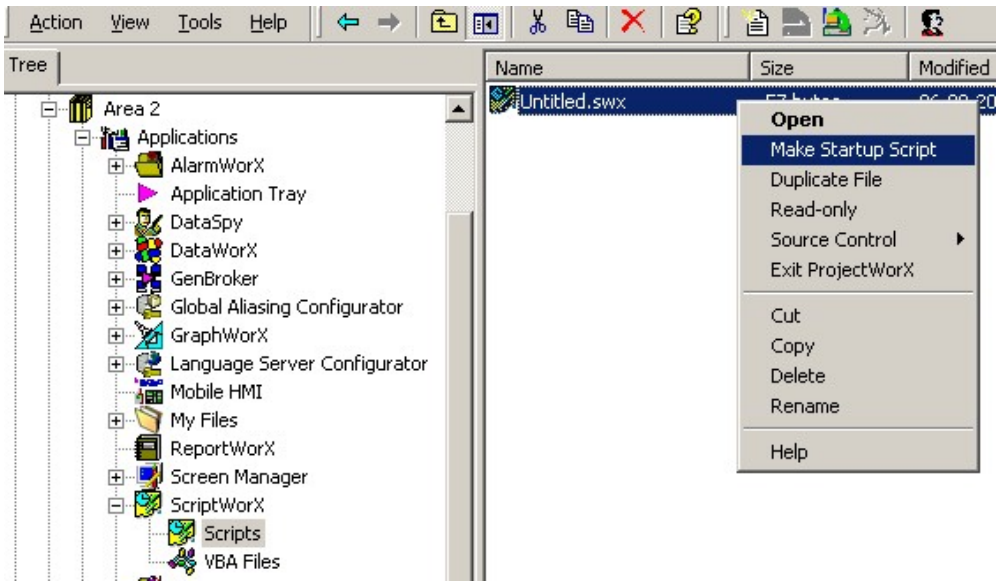


Scripts Subtree

Specifying a ScriptWorX Startup Script

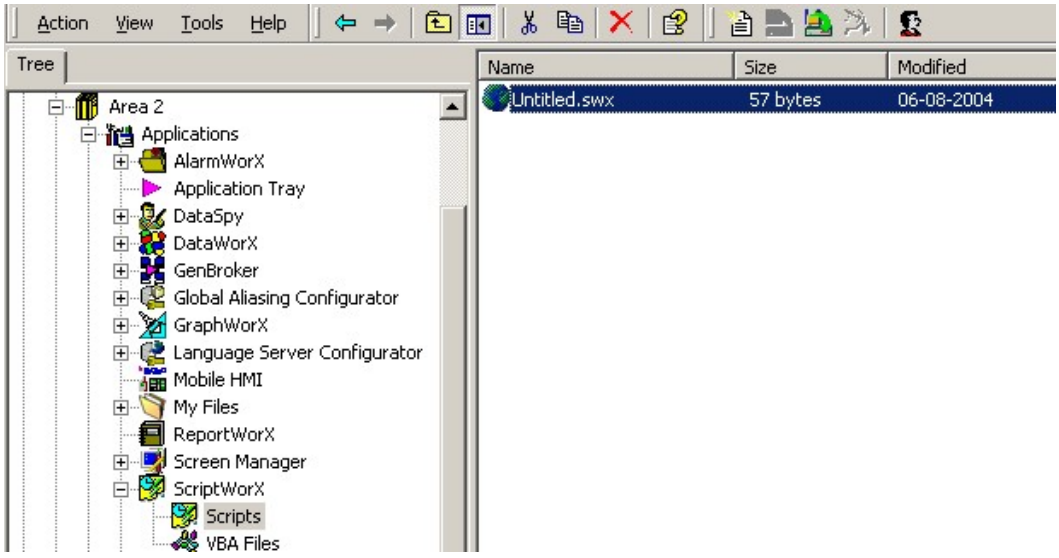
The **Scripts** subtree of the ScriptWorX tree provides an option to specify a startup script that automatically opens when ScriptWorX is started from ProcessView Tray. To specify a ScriptWorX file as the startup script in the ProjectWorX console:

1. Right-click the script file and select **Make Startup Script** from the pop-up menu, as shown in the figure below.



Specifying a ScriptWorX Startup Script

2. The icon next to the project file changes from the standard ScriptWorX icon to a globe icon, as shown in the figure below. The next time ScriptWorX is launched from the ProcessView Tray, the startup script will automatically open in ScriptWorX.

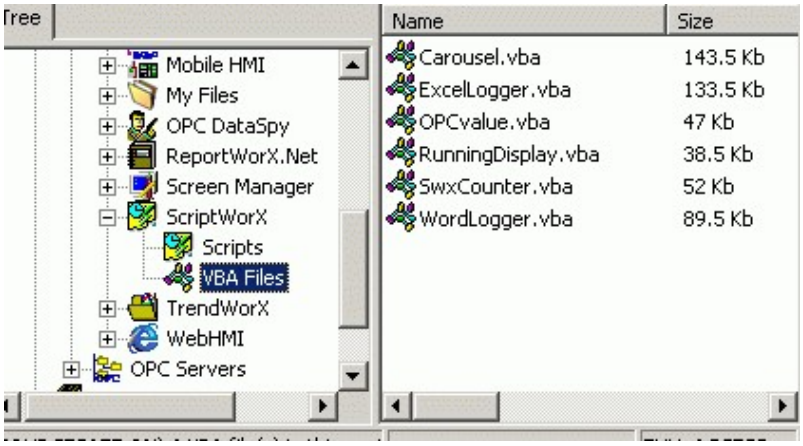


Startup Project Indicated in Scripts Tree

ScriptWorX VBA Files

The **VBA Files** subtree of the ScriptWorX tree in the ProjectWorX console, shown in the figure below, contains all VBA scripts that correspond to the ScriptWorX (.swx) script files in the **Scripts**

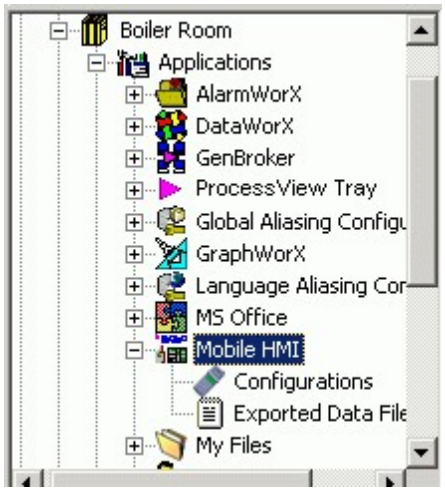
subtree. Although you cannot directly modify the .vba files, any time a change is made to a .swx script file, the change is reflected in the .vba file that corresponds to that .swx file.



VBA Files Subtree

MobileHMI Tree

The **MobileHMI** tree in the ProjectWorX console, shown in the figure below, manages MobileHMI configuration databases. The MobileHMI Configurator uses Microsoft SQL Server databases, and it uses Universal Data Link (.udl) files to connect to the Microsoft SQL Server database. These .udl files contain OLE database connection information that allows the Configurator to create and manage connections to OLE databases.



MobileHMI Tree in ProjectWorX Console

MobileHMI Configurations

The **Configurations** subtree of the MobileHMI tree in the ProjectWorX console, shown in the figure below, includes all the MobileHMI configuration databases available for a project. From here you can right-click and create new configurations or add existing configuration databases to the project. You can also activate the database

NOTE
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX (e.g. with the MobileHMI Configurator) you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status.

MobileHMI Configurations Subtree

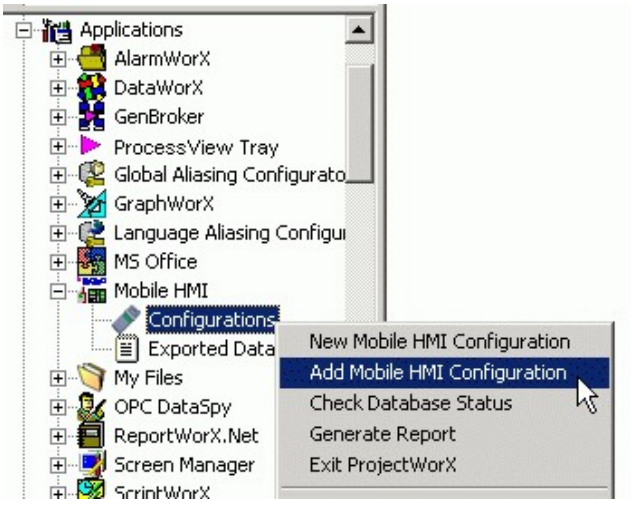
The following conditions apply to SQL Server configuration databases in ProjectWorX:

- ProjectWorX will not accept SQL Server configuration databases whose file names contain spaces because Microsoft SQL Server 2000 is not able to bulk export such databases.
- If a SQL configuration has dependent files (e.g. image files, sound files, etc.), these files will be packed along with the project automatically as referenced files.
- If ProjectWorX is used to perform certain operations on configurations while an instance of the configurator is open, a dialog box will be shown asking the user to close the configurator. ProjectWorX is blocked until the configurator is closed.
- Difference unpacking of projects will not work for SQL-based configurations. When unpacking SQL configuration files, all SQL configurations will not be overwritten even if the packed project contains newer files of the same name.
- ProjectWorX does not support direct check-in/check-out SQL databases to Microsoft Visual SourceSafe.

Adding a MobileHMI Configuration Database

To add a MobileHMI SQL configuration database to a project:

1. Right-click the configuration tree and select **Add MobileHMI Configuration,** as shown in the figure below.

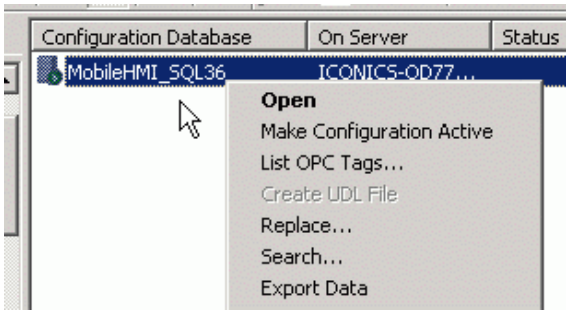


Adding a SQL Server Configuration Database

2. In the **Add UDL Files** dialog box, select a .udl file and click **Open** to add the configuration database to the current project.

3. The configuration database appears in the configurations subtree in the right-hand pane of the ProjectWorX console. The details view lists the following properties for the configuration database:

- **Configuration Database:** Name of the database
- **On Server:** Name of the SQL Server in which the database was created
- **Status:** The status of the database (could be normal, offline, etc)
- **Linked UDL File:** The path to the UDL file used to identify the database



Configuration File Added

4. The new file appears in the right-hand pane of the ProjectWorX console, as shown in the figure below. If you right-click the file, the **Create UDL File** option is normally grayed out, as shown in the figure below. If the link to the .udl file is ever broken inside the ProjectWorX database, the **Create UDL File** option will become available and you will be able to create a new .udl file for the configuration.

NOTE
Deleting a Microsoft SQL Server database configuration file from a project will delete it only from the project, not from SQL Server. (The .udl file will not be deleted as well.)

Creating a New MobileHMI SQL Configuration Database

To create a new MobileHMI configuration database in the ProjectWorX console:

1. Right-click the **Configurations** subtree in the **MobileHMI** tree and select **New MobileHMI Configuration** from the pop-up menu, as shown in the figure below.

Creating a New MobileHMI Configuration Database

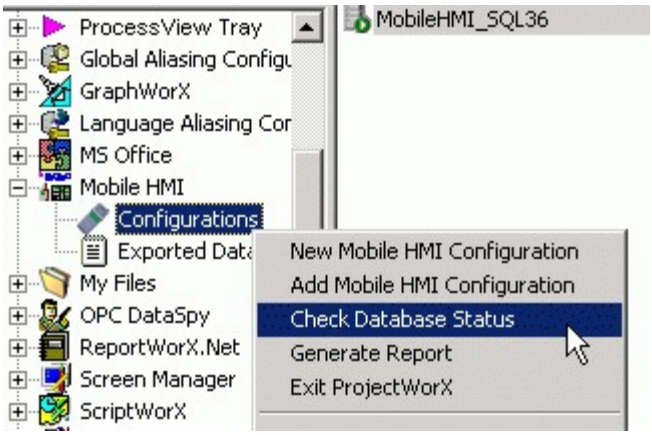
2. ProjectWorX launches the **MobileHMI Configuration Database Wizard,** which will help you create a new MobileHMI configuration database.

NOTE
For complete information about creating and configuring MobileHMI databases, please refer to the MobileHMI Configurator Help documentation.

Checking the Database Status

The **Check Database Status** option is useful for checking the status of all the Microsoft SQL Server databases added to the project. ProjectWorX does not poll SQL Server regularly to get the database status, so a “Normal” status will always be displayed even if the database is offline. By using the check status option, the list of databases will be refreshed and any eventual problem will be displayed.

To get the status of a SQL Server database, right-click and select **Check Database Status** from the pop-up menu, as shown in the figure below.



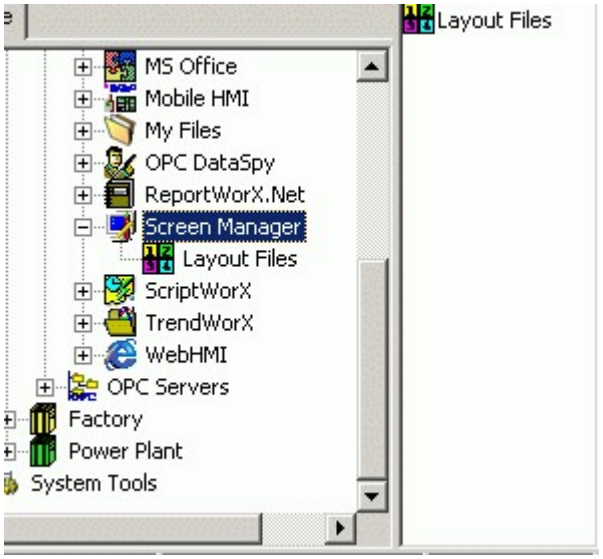
Checking the Database Status

The status of the database is indicated as follows:

- **Normal:** The database is online and ready
- **Missing:** The database is no longer on the server.
- **Offline:** The database is still on the server but is currently offline.
- **Recovering:** The database is recovering.
- **Loading:** The database is currently loading and will be available soon.
- **Suspect:** The database may have become corrupt.
- **Not Available:** An unknown error has occurred and the database is not available.

Screen Manager Tree

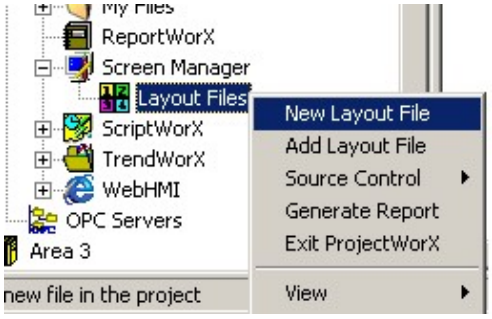
The **Screen Manager** tree in the ProjectWorX console, shown in the figure below, manages all the Screen Manager layout files for ProcessView projects. The Screen Manager tree allows you to specify an automatic startup layout for the machine running the project. ProjectWorX includes eight default layout (.pwf) files as templates from which to create new Screen Manager layouts to include in projects.



Screen Manager Tree in ProjectWorX Console

Screen Manager Layout Files

The **Layout Files** subtree of the Screen Manager tree in the ProjectWorX console, shown in the figure below, includes all the Screen Manager layout (.pwf) files available for a project. From here you can right-click and create new files or add existing layout files to the project. You can also specify a startup layout.

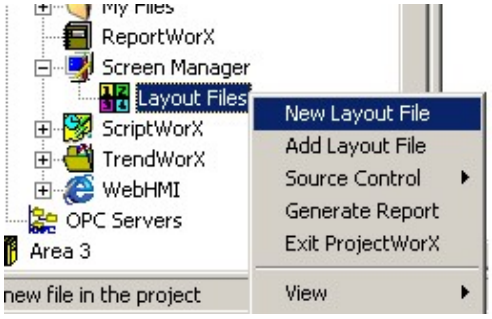


Screen Manager Layout Files Subtree

Creating a New Screen Manager Layout File

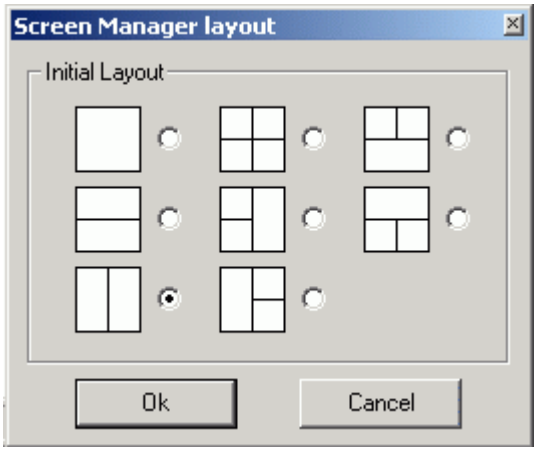
To create a new Screen Manager layout file in the ProjectWorX console:

1. Right-click **Layout Files** in the **Screen Manager** tree and select **New Layout File** from the pop-up menu, as shown in the figure below.



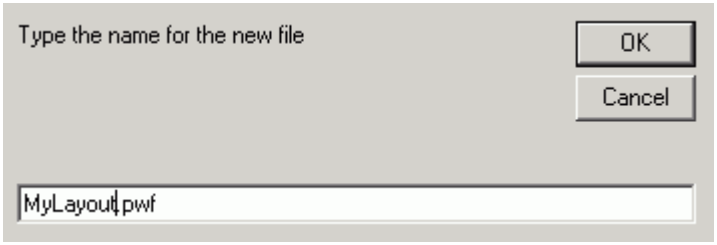
Creating a New Screen Manager Layout File

2. Choose one type of layout to create from the eight layout templates that are provided, as shown in the figure below. Click **OK.**



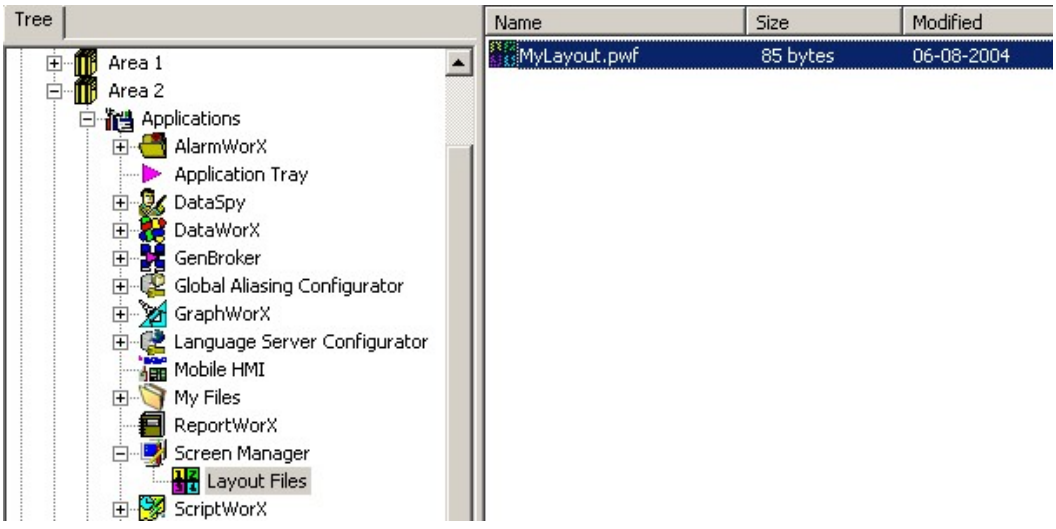
Selecting a Layout

3. Give the new layout file a name, as shown in the figure below. Click **OK.**



Naming the Layout File

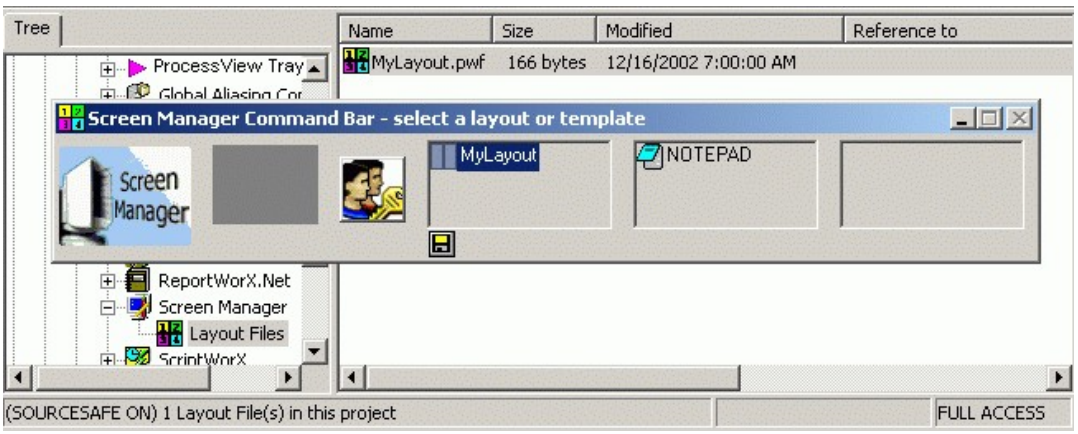
4. The new layout file appears in the **Layout Files** subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below.



New Layout File Added to Screen Manager Tree

5. ProjectWorX automatically launches the new layout file in the Screen Manager, as shown in the figure below. As you can see, all layout files for the project appear in the Screen Manager Command Bar. Now you can modify the layouts as needed in the Screen Manager.

NOTE
For information about configuring layout files, please refer to the Screen Manager Help documentation.

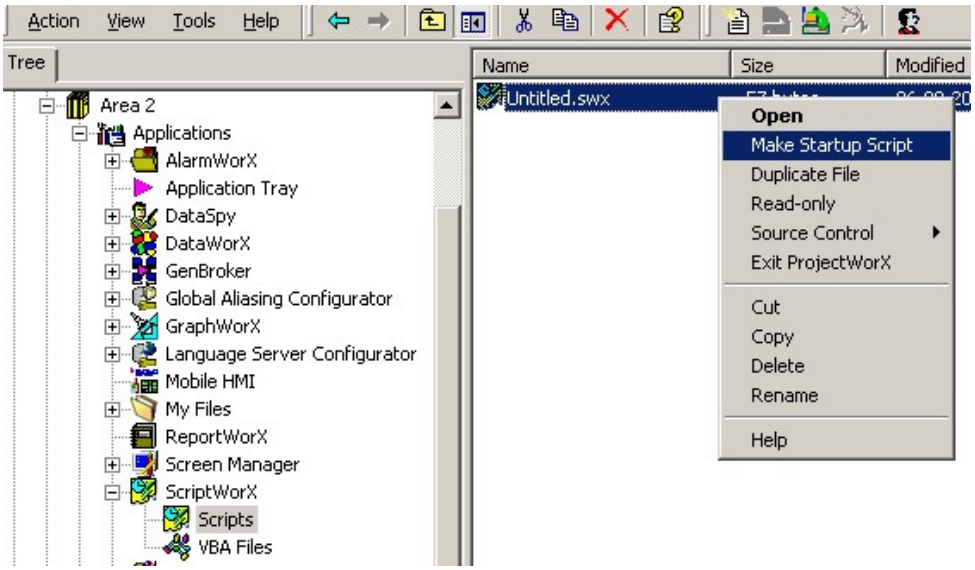


Screen Manager Launched With Project Layouts

Specifying a Screen Manager Startup Layout

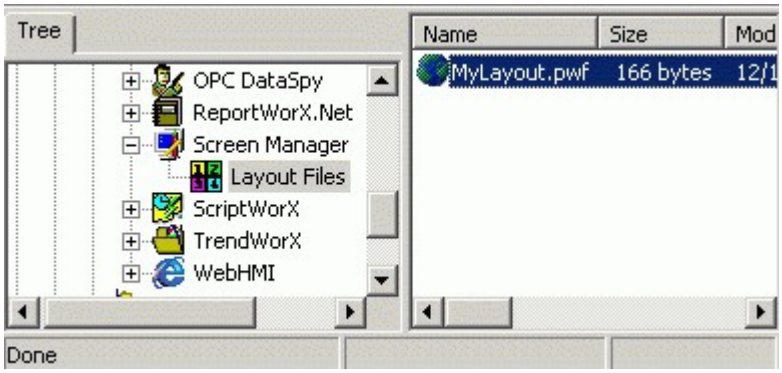
The **Layout Files** subtree of the Screen Manager tree provides an option to specify a startup layout that automatically opens when Screen Manager is launched from ProcessView Tray. To specify a Screen Manager project file as the startup layout in the ProjectWorX console:

1. Right-click the layout file and select **Make Startup Layout** from the pop-up menu, as shown in the figure below.



Specifying a Screen Manager Startup Layout

2. The icon next to the layout file changes from the standard Screen Manager layout icon to a globe icon, as shown in the figure below. The next time Screen Manager is launched from ProcessView Tray, the startup layout will automatically open in Screen Manager.



Startup Layout Indicated in Layout Files Tree

GenBroker Tree

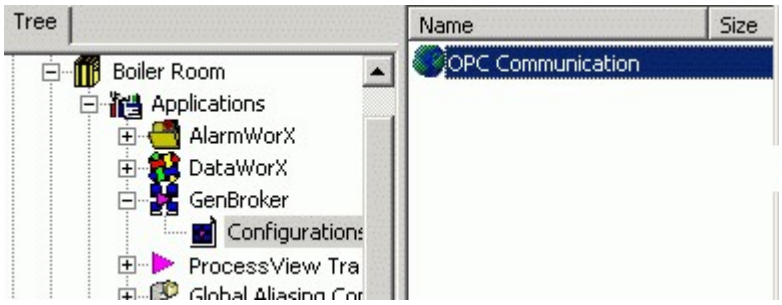
The **GenBroker** tree in the ProjectWorX console, shown in the figure below, manages GenBroker configuration files for each project. GenBroker allows you to specify OPC communication types for networks.

GenBroker Tree in ProjectWorX Console

GenBroker Configurations

The **GenBroker Configurations** subtree of the GenBroker tree in the ProjectWorX console, shown in the figure below, includes all the GenBroker configuration files available for a project. From here you can right-click and create new files or add existing configuration files to the project. You can also activate a GenBroker configuration.

A default **OPC (OLExpress) Communication** item is listed in the GenBroker configurations. When no GenBroker configuration (.gbc or .gbx) files are present, the default method of communication is OLExpress or COM\DCOM.

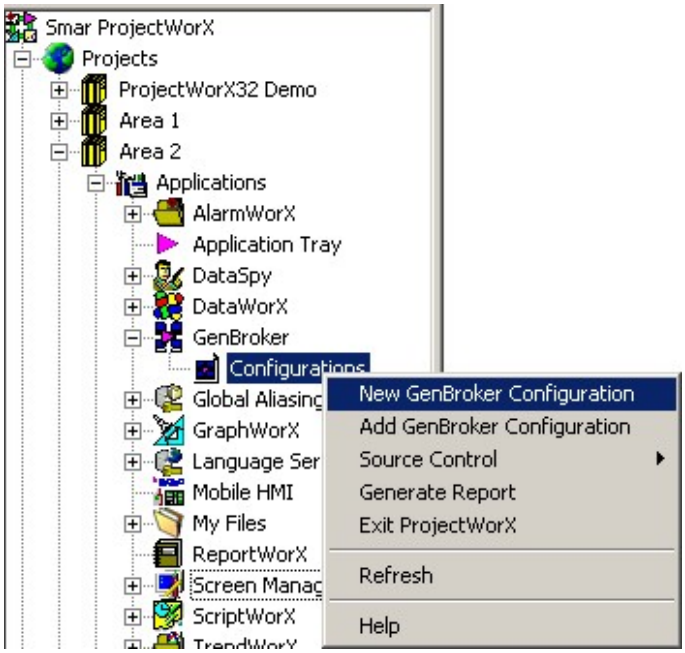


GenBroker Configurations Subtree

Creating a New GenBroker Configuration

To create a new GenBroker configuration in the ProjectWorX console:

1. Right-click **Configurations** in the **GenBroker** tree and select **New GenBroker Configuration** from the pop-up menu, as shown in the figure below.



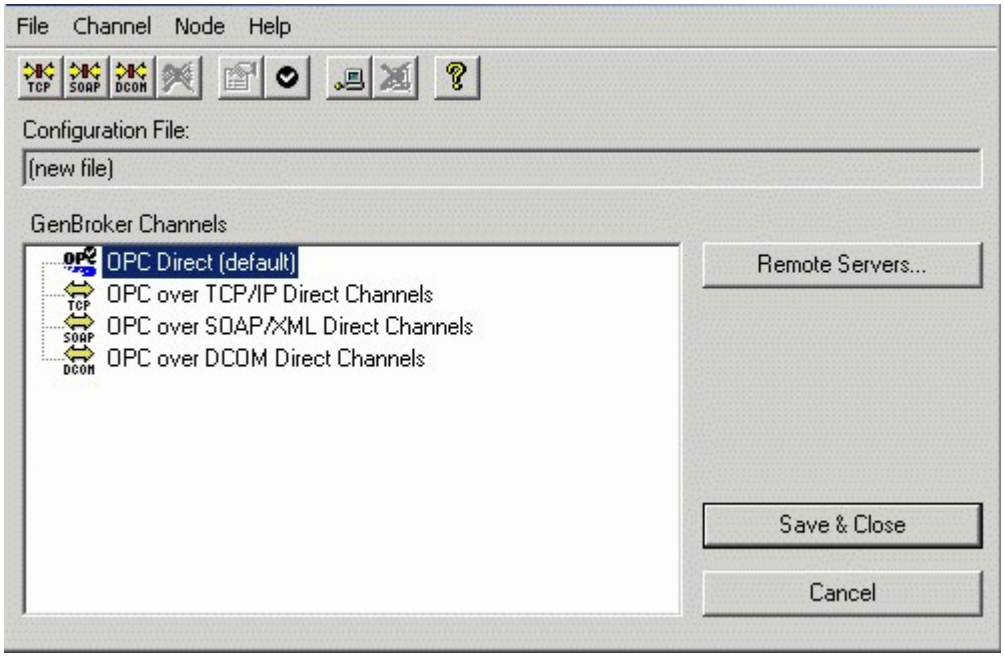
Creating a New GenBroker Configuration

2. Give the new file a name, as shown in the figure below. Click **OK.**

Naming the GenBroker Configuration File

3. This opens the GenBroker Configurator, as shown in the figure below. Configure GenBroker and then click the **Save & Close** button.

NOTE
For information about configuring GenBroker, please refer to the GenBroker Help documentation.



Creating a New GenBroker Configuration

4. The new configuration file appears in the **GenBroker Configurations** subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below.

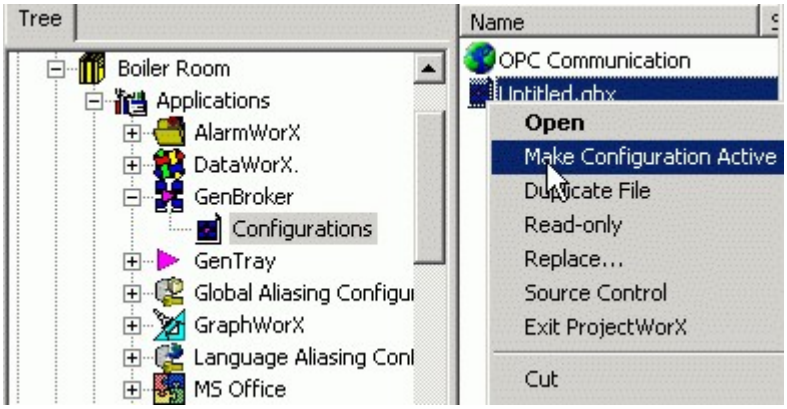
New GenBroker Configuration File Added to GenBroker Tree

Activating a GenBroker Configuration

The **GenBroker Configurations** subtree of the GenBroker tree provides an option to activate a GenBroker configuration file that automatically opens when GenBroker is launched from ProcessView Tray.

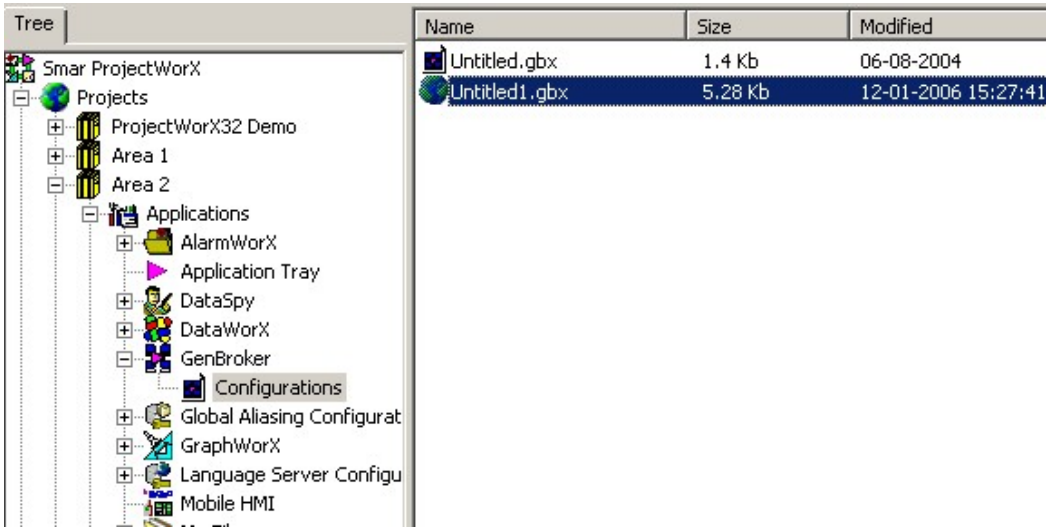
To specify a GenBroker configuration file as the active configuration in the ProjectWorX console:

1. Right-click the configuration file and select **Make Configuration Active** from the pop-up menu, as shown in the figure below.



Activating a GenBroker Configuration File

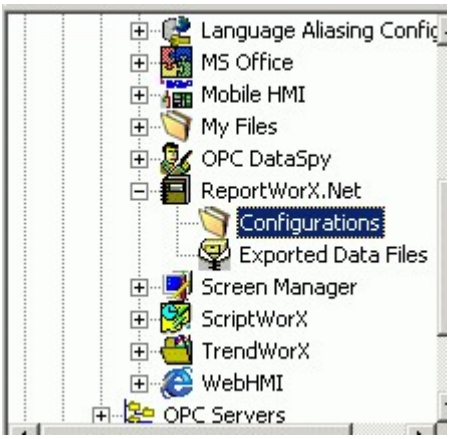
2. The icon next to the project file changes from the standard GenBroker icon to a globe icon, as shown in the figure below. The next time GenBroker is launched from the ProcessView Tray, the active configuration automatically opens in the GenBroker Configurator.



Activated GenBroker Configuration File Indicated in GenBroker Tree

ReportWorX Tree

The **ReportWorX** tree in the ProjectWorX console, shown in the figure below, manages ReportWorX configuration databases. ReportWorX uses Microsoft SQL Server databases, and it uses Universal Data Link (.udl) files to connect to the Microsoft SQL Server database. These .udl files contain OLE database connection information that allows the Configurator to create and manage connections to OLE databases.

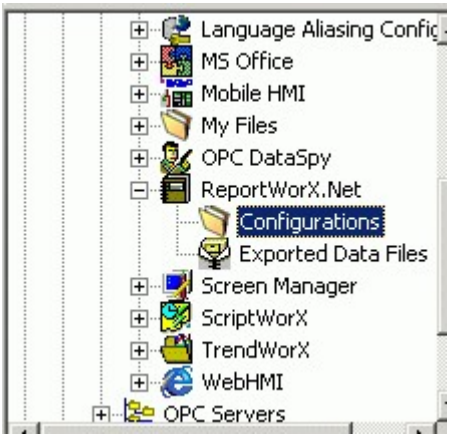


ReportWorX Tree in ProjectWorX Console

ReportWorX Configurations

The **Configurations** subtree of the ReportWorX tree in the ProjectWorX console, shown in the figure below, includes all the ReportWorX configuration databases available for a project. From here you can right-click and create new configurations or add existing configuration databases to the project. You can also activate the database.

NOTE
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status.



ReportWorX Configurations Subtree

The following conditions apply to SQL Server configuration databases in ProjectWorX:

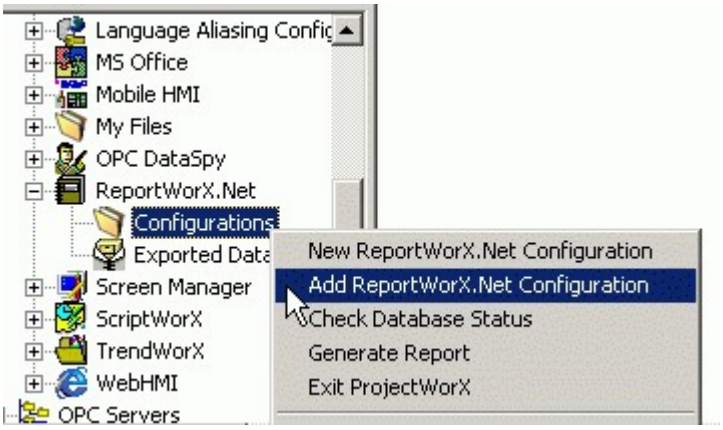
- ProjectWorX will not accept SQL Server configuration databases whose file names contain spaces because Microsoft SQL Server 2000 is not able to bulk export such databases.
- If a SQL configuration has dependent files (e.g. image files, sound files, etc.), these files will be packed along with the project automatically as referenced files.
- If ProjectWorX is used to perform certain operations on configurations while an instance of the configurator is open, a dialog box will be shown asking the user to close the configurator. ProjectWorX is blocked until the configurator is closed.
- Difference unpacking of projects will not work for SQL-based configurations. When unpacking SQL configuration files, all SQL configurations will not be overwritten even if the packed project contains newer files of the same name.

- ProjectWorX does not support direct check-in/check-out SQL databases to Microsoft Visual SourceSafe.

Adding a ReportWorX Configuration Database

To add a ReportWorX SQL configuration database to a project:

1. Right-click the configuration tree and select **Add ReportWorX Configuration,** as shown in the figure below.



Adding a ReportWorX Configuration Database

2. In the **Add UDL Files** dialog box, select a .udl file and click **Open** to add the configuration database to the current project.

3. The configuration database appears in the configurations subtree in the right-hand pane of the ProjectWorX console. The details view lists the following properties for the configuration database:

- **Configuration Database:** Name of the database
- **On Server:** Name of the SQL Server in which the database was created
- **Status:** The status of the database (could be normal, offline, etc)
- **Linked UDL File:** The path to the UDL file used to identify the database

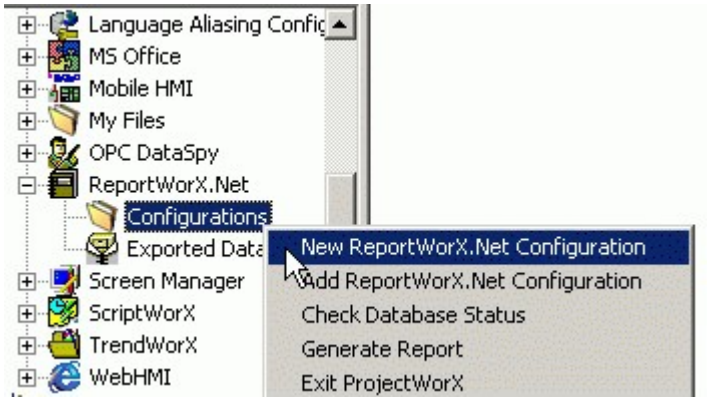
4. The new file appears in the right-hand pane of the ProjectWorX console, as shown in the figure below. If you right-click the file, the **Create UDL File** option is normally grayed out. If the link to the .udl file is ever broken inside the ProjectWorX database, the **Create UDL File** option will become available and you will be able to create a new .udl file for the configuration.

NOTE
Deleting a Microsoft SQL Server database configuration file from a project will delete it only from the project, not from SQL Server. (The .udl file will not be deleted as well.)

Creating a New ReportWorX Configuration Database

To create a new ReportWorX configuration database in the ProjectWorX console:

1. Right-click the **Configurations** subtree and select **New ReportWorX Configuration** from the pop-up menu, as shown in the figure below.



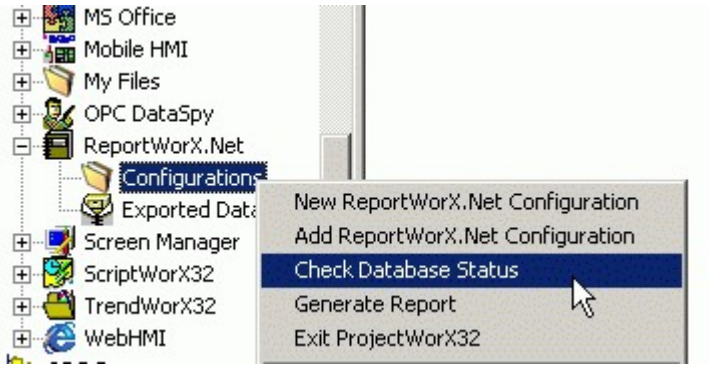
Creating a New ReportWorX Configuration Database

2. ProjectWorX launches the **ReportWorX Configuration Database Wizard,** which will help you create a new configuration database.

Checking the Database Status

The **Check Database Status** option is useful for checking the status of all the Microsoft SQL Server databases added to the project. ProjectWorX does not poll SQL Server regularly to get the database status, so a "Normal" status will always be displayed even if the database is offline. By using the check status option, the list of databases will be refreshed and any eventual problem will be displayed.

To get the status of a SQL Server database, right-click and select **Check Database Status** from the pop-up menu, as shown in the figure below.



Checking the Database Status

The status of the database is indicated as follows:

- **Normal:** The database is online and ready
- **Missing:** The database is no longer on the server.
- **Offline:** The database is still on the server but is currently offline.
- **Recovering:** The database is recovering.
- **Loading:** The database is currently loading and will be available soon.
- **Suspect:** The database may have become corrupt.
- **Not Available:** An unknown error has occurred and the database is not available.

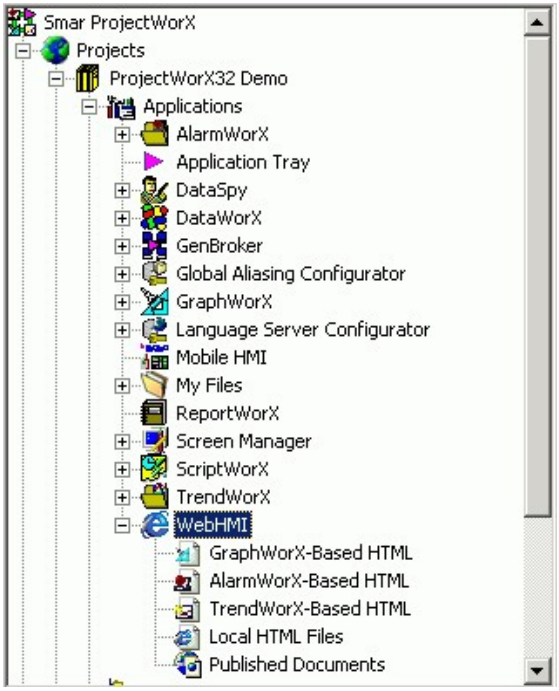
WebHMI Tree

The **WebHMI** tree in the ProjectWorX console, shown in the figure below, manages Web publishing for each project. From here you can right-click and publish files to a Web server. The WebHMI tree includes the following categories of files for WebHMI users:

- GraphWorX-Based HTML
- AlarmWorX-Based HTML

- TrendWorX-Based HTML
- Local HTML Files
- Published Documents

For more information about these categories, please see **Chapter 6.**

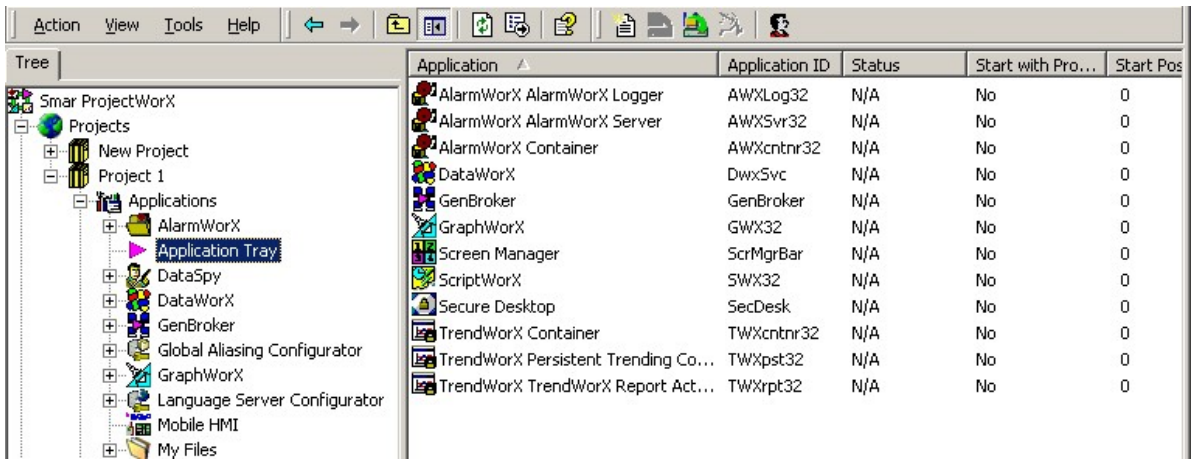


WebHMI Tree in ProjectWorX Console

ProcessView Tray Tree

The **ProcessView Tray** tree of the ProjectWorX console, shown in the figure below, is a snap-in that includes all the capabilities of the ProcessViewTray application. When the ProcessView Tray tree is selected, a list of the ProcessView applications on the machine is provided, as shown in the figure below. From this list you can check to see whether a server or an application is running and browse their settings. For more information about ProcessView Tray, please see **Chapter 4.**

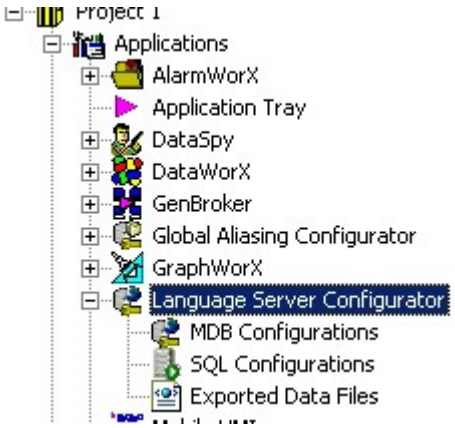
NOTE
The ProcessView Tray tree shows data for the active project only.



ProcessView Tray Tree in ProjectWorX Console

Language Aliasing Tree

The **Language Aliasing** tree in the ProjectWorX console, shown in the figure below, manages language configuration databases for each project.



Language Aliasing Tree in ProjectWorX Console

Language Configurations

The **Configurations** subtrees of the Language Aliasing tree in the ProjectWorX console, shown in the figure below, include all the Language Configurator databases available for a project. From here you can right-click and create new databases or add existing configuration databases to the project. You can also activate the database. When you create a new SQL Server database, ProjectWorX launches the **Configuration Database Wizard,** which will help you create a new configuration database.

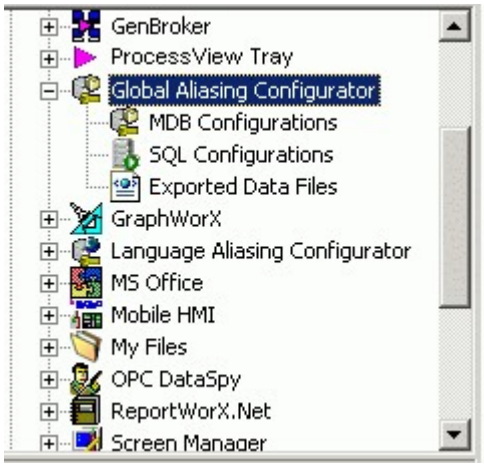
The Language Aliasing Configurator supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. For more information about SQL databases, please see "Adding a SQL Server Configuration Database to a Project."

NOTES
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status. For complete information about creating and configuring Language Server databases, please refer to the Language Aliasing Configurator Help documentation.

Language Aliasing Configuration Subtree

Global Aliasing Tree

Global Aliasing tree in the ProjectWorX console, shown in the figure below, includes all the Global Aliasing Configurator databases available for a project.



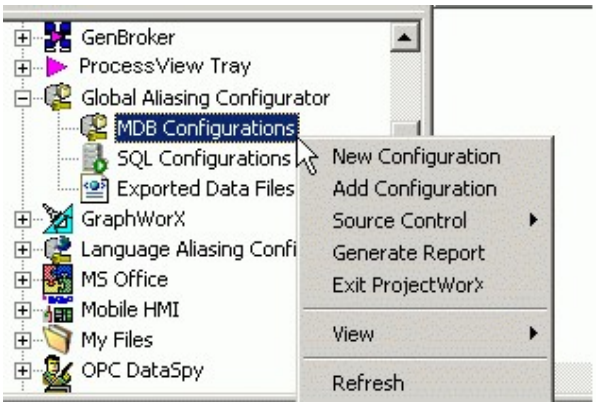
Global Aliasing Tree

Global Aliasing Configurations

The **Configurations** subtrees of the Global Aliasing tree in the ProjectWorX console, shown in the figure below, include all the Global Aliasing Configurator databases available for a project. From here you can right-click and create new databases or add existing configuration databases to the project. You can also activate the database. When you create a new SQL Server database, ProjectWorX launches the **Configuration Database Wizard,** which will help you create a new configuration database.

The Global Aliasing Configurator supports both Microsoft Access (.mdb) databases and Microsoft SQL Server (or MSDE) based databases. For more information about SQL databases, please see "Adding a SQL Server Configuration Database to a Project."

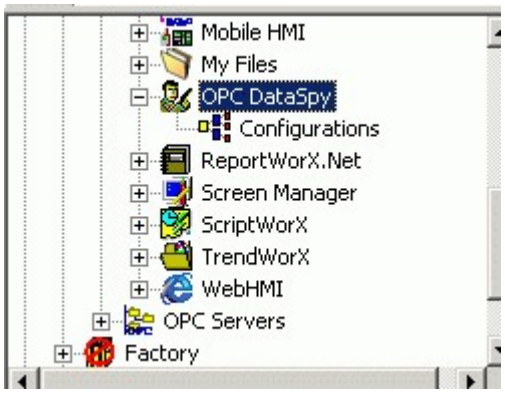
NOTES
For active Microsoft SQL Server configuration databases, information is stored inside the ProjectWorX database and is not subject to continuous polling. If the active configuration is changed from outside ProjectWorX you will have to refresh the view by right-clicking and selecting **Refresh** from the pop-up menu. This updates ProjectWorX with the new database status. For complete information about creating and configuring Global Aliases, please refer to the Global Aliasing Configurator Help documentation.



Global Aliasing Configurator Subtree

OPC DataSpy Tree

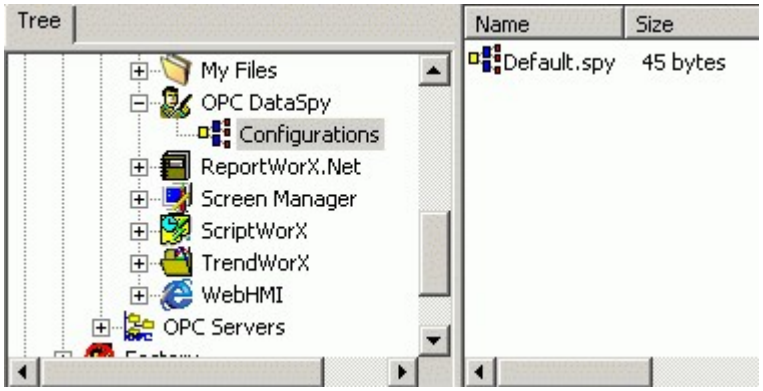
The **OPC DataSpy** tree in the ProjectWorX console, shown in the figure below, includes all the OPC DataSpy files available for a project.



OPC DataSpy Tree in ProjectWorX Console

OPC DataSpy Configurations

In the **Configurations** subtree of the OPC DataSpy tree in the ProjectWorX console, you can right-click and create new files or add existing files to the project.



OPC DataSpy Configurations Subtree

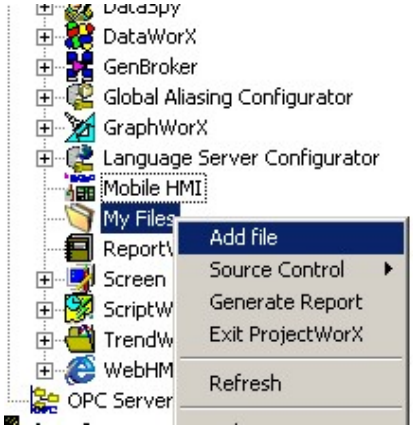
My Files Tree

The **My Files** tree in the ProjectWorX console, shown in the figure below, allows you to add any type of file you wish to the project. The only difference here is that you will not see the packing, unpacking, or Web publishing log files.

To add a file:

1. Right-click the **My Files** tree and select **Add File** from the pop-up menu, as shown in the figure below.

2. Choose a file to add, and then click **Open.** The new file appears in the right-hand pane of the ProjectWorX console.

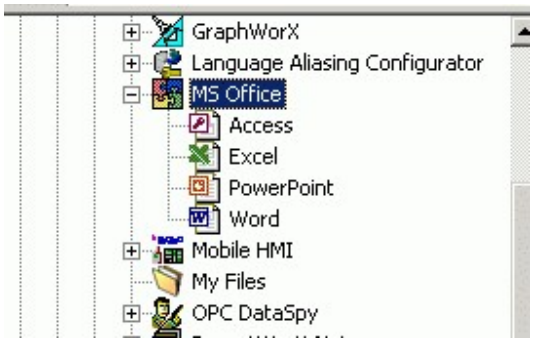


My Files Tree

Microsoft Office Tree

You have the option of displaying the (third-party) **Microsoft (MS) Office** tree in the ProjectWorX console. This tree, shown in the figure below, manages files for Microsoft Word, Microsoft PowerPoint, Microsoft Excel, and Microsoft Access, is hidden by default. When enabled in the **Show/Hide Applications** dialog box, the **MS Office** tree is displayed under the project **Applications** tree. The MS Office tree is similar to the other application trees in that you can create, add, copy, delete, and open files. You can also generate reports.

NOTE
You can also perform global searches in Microsoft Excel spreadsheets. For more information, please see **Chapter 2.**



Microsoft Office Tree

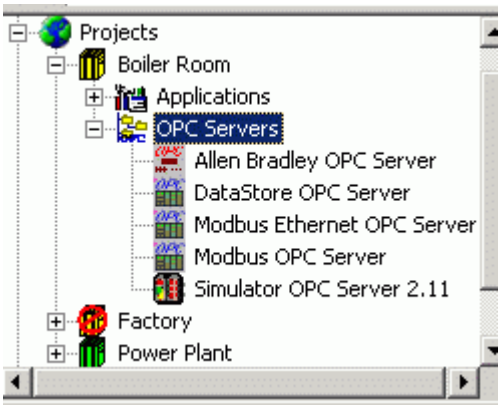
To display the MS Office tree:

1. Right-click the on the **Applications** tree and select **Customize Applications** from the pop-up menu, as shown in the figure below.
2. This opens the **Show/Hide Applications** dialog box. Check **MS Office,** and then click **OK.**

OPC Servers Tree

The **OPC Servers** tree for each project, shown in the figure below, allows you to create and manage OPC server configurations. Each time you create a new OPC server configuration inside a project in the **OPC Servers** tree, the new file is saved to the project folder in the "Bin" directory. If you add an existing configuration file, you have the option of copying the file to the project folder or running the file from its current location.

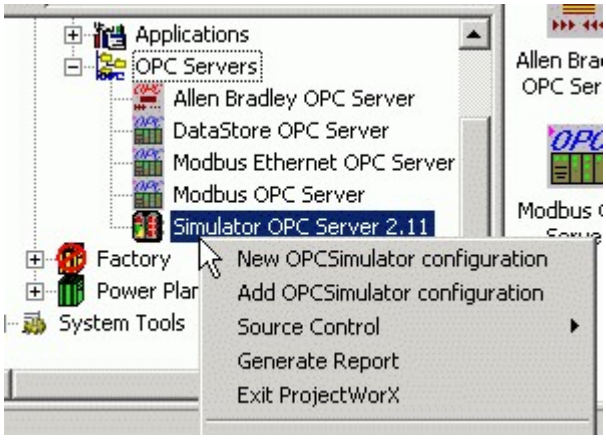
NOTE
ProjectWorX currently supports configuration for the Simulator OPC Server only, which is installed with ProcessView. All other OPC servers (e.g. DataStore OPC Server, etc.) must be installed before you can configure them through ProjectWorX**.**



Project OPC Servers

OPC Simulator Tree

The **OPC Simulator** subtree component of the OPC Servers tree in the ProjectWorX console, shown in the figure below, includes all the Simulator OPC server configuration files available for a project. From here you can right-click and add existing configuration files to the project.

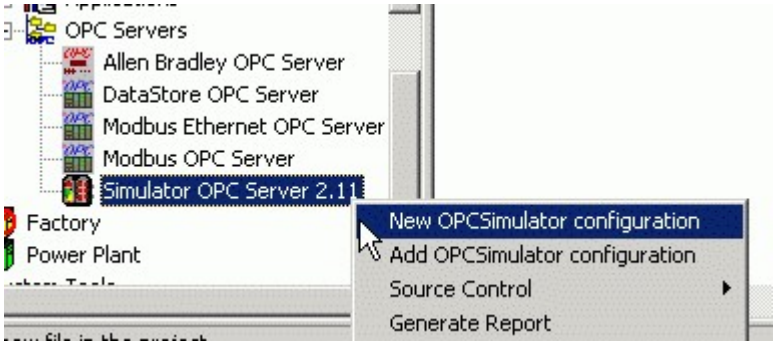


OPC Simulator Subtree

Creating a New Simulator OPC Server Configuration File

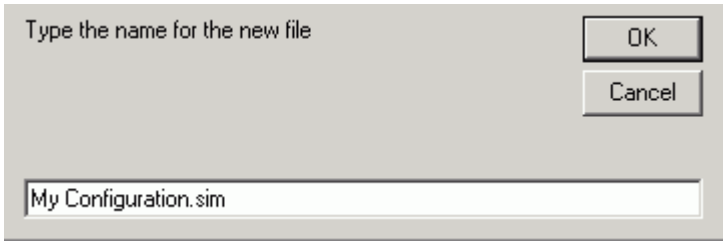
To create a new Simulator OPC Server configuration file in the ProjectWorX console:

1. Right-click **OPC Simulator** in the **OPC Servers** tree and select **New OPC Simulator configuration** from the pop-up menu, as shown in the figure below.



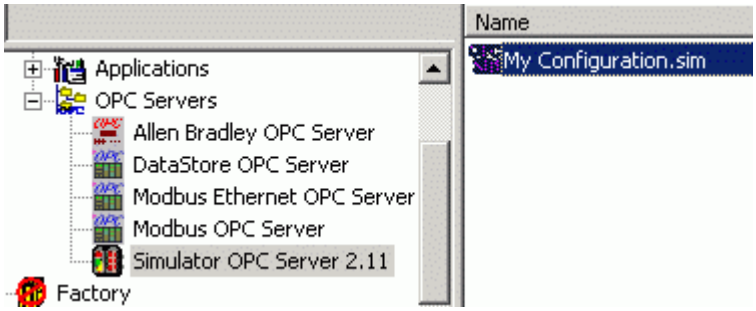
Creating a New OPC Simulator Configuration File

2. Give the new file a name, as shown in the figure below. Click **OK.**



Naming the New File

3. The new file appears in the **OPC Simulator** subtree in the right-hand pane of the ProjectWorX console, as shown in the figure below. ProjectWorX automatically launches the new file in Simulator OPC Server Configurator.

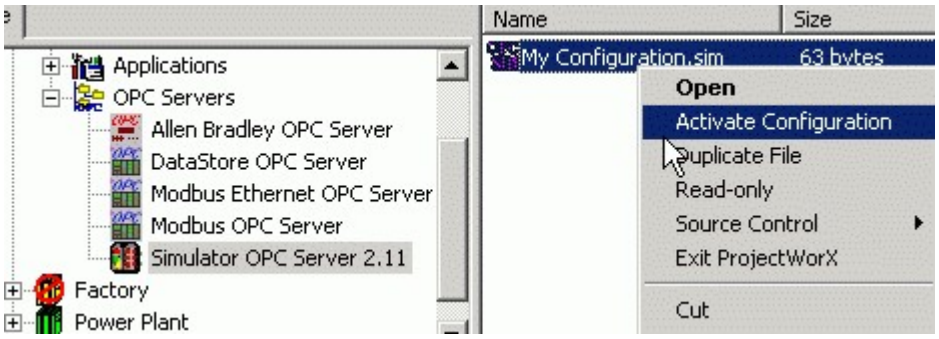


New File Added to OPC Simulator Tree

Activating a Simulator OPC Server Configuration

The **OPC Simulator** in the **OPC Servers** tree provides an option to activate a Simulator OPC Server configuration file:

1. Right-click the configuration file and select **Activate Configuration** from the pop-up menu, as shown in the figure below.



Activating a Simulator OPC Server Configuration

2. ProjectWorX automatically launches the new file in Simulator OPC Server Configurator.

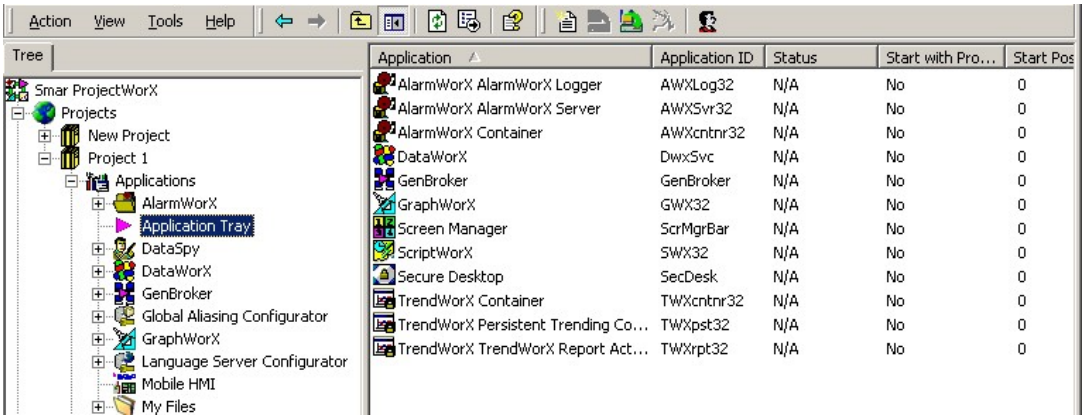
Chapter 4

PROCESSVIEW TRAY, SYSTEM TOOLS AND SECURITY

ProcessView Tray

The **ProcessView Tray** tree of the ProjectWorX console, shown in the figure below, includes all the capabilities of the ProcessView Tray application. When the ProcessView Tray tree is selected, a list of the ProcessView applications on the machine is provided, as shown in the figure below. From this list you can check to see whether a server or an application is running and browse their settings.

NOTE
The ProcessView Tray tree shows data for the active project only.



ProcessView Tray Tree in ProjectWorX Console

Starting and Stopping Applications Using ProcessView Tray

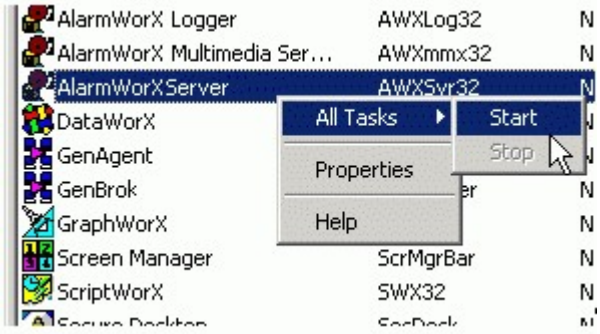
ProcessView Tray provides a way to either manually or automatically start and/or stop applications within ProcessView . In the ProcessView Tray tree for the active project in the ProjectWorX console, you can specify which applications and servers to start and stop. You can also set up applications to run auto start upon Windows startup, setting their timing and launching position parameters.

Note: An application can be detected as running only if the application is launched through the ProcessView Tray.

Starting Applications From ProcessView Tray

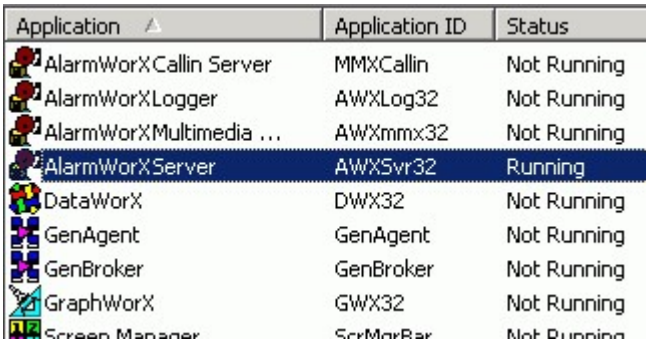
To launch an application from ProcessView Tray:

1. Right-click the application in the details view and select **All Tasks > Start** from the pop-up menu, as shown in the figure below.



Starting an Application in ProcessView Tray

2. The application is launched and the **Status** changes to **Running,** as shown in the figure below.



Starting an Application in ProcessView Tray

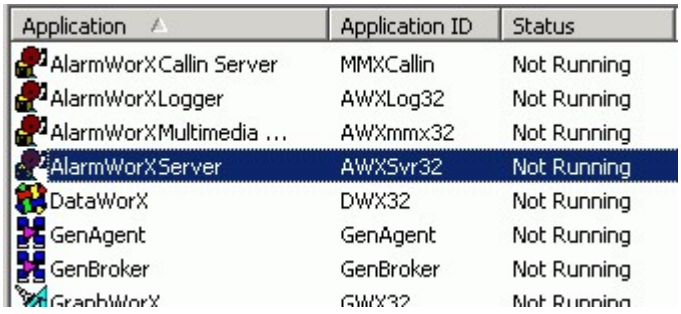
Stopping Applications From ProcessView Tray

To shut down a running application from ProcessView Tray:

1. Right-click the application in the details view and select **All Tasks > Stop** from the pop-up menu, as shown in the figure below.

Stopping an Application in ProcessView Tray

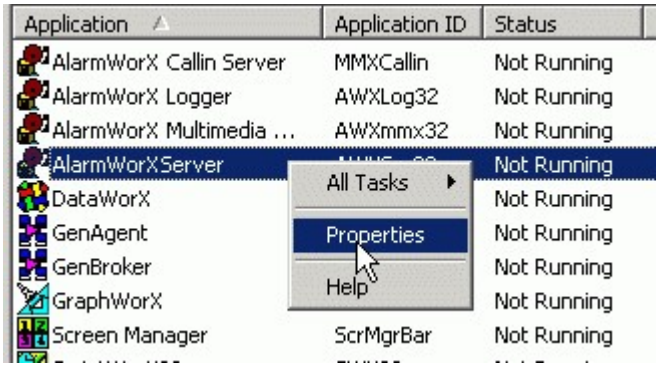
2. The application is stopped, and the status changes to **Not Running,** as shown in the figure below.



Application Stopped in ProcessView Tray

Setting Application Properties From ProcessView Tray

From the ProcessView Tray tree of the ProjectWorX console, you can view application properties for both clients and servers. Any changes that you make to the application properties settings are reflected in the details list of the ProjectWorX ProcessView Tray tree. To change the properties for an application, right-click the application in the details view and select **Properties** from the pop-up menu, as shown in the figure below.



Viewing Application Properties From the ProcessView Tray Tree

The Properties dialog box opens, as shown in the figure below. The properties indicate the current status of the application (i.e. Running or Not Running).

The server properties are slightly different from the client properties. The server properties have Run as a Service and Run at Startup options, while client properties instead have a Command Line feature that indicates the designated startup file for the application (as specified in the active project).

ProcessView Tray enables you register and run servers as an NT service. To convert a server to an NT service, check the Run as a Service check box, as shown in the figure below. Once an application is converted to an NT service, checking the Run at Startup check box makes it an automatic service so that it will automatically start every time the computer is restarted.

Server Properties

The **Auto Start** and **Auto Stop** options enable a ProcessView system application to be opened and shut down automatically and in an orderly fashion. Selecting these items puts the application in a management list with other applications that are auto started and auto stopped. The order in which these applications are started or stopped is determined by the relative start and stop positions specified in the application properties. Both the server properties and client properties dialogs have the following ProcessView Tray application startup and shutdown options, which set the start and stop parameters for the application:

- **Auto Start:** When checked, ProcessView Tray automatically launches the application upon ProcessView Tray startup.
- **Startup Position:** Specifies the order in which the application will be started (if multiple applications are auto started). For example, if both GraphWorX and AlarmWorX are to be auto started but you want GraphWorX to start before AlarmWorX starts, set the startup position for GraphWorX to "1" and the startup position for AlarmWorX to "2."
- **Startup Delay:** Sets the delay (in seconds) before the application is launched.
- **Auto Stop:** When checked, ProcessView Tray automatically stops the application upon ProcessView Tray shutdown.
- **Shutdown Position:** Specifies the order in which the application will be shut down (if multiple applications are auto stopped).
- **Shutdown Delay:** Sets the delay (in seconds) before the application is stopped.

Click the **Apply** button to set the parameters you have selected in the application properties.

Client Properties

Viewing Application Parameters in ProcessView Tray

The parameters that are set the application properties are displayed in the details view of the ProcessView Tray, as shown in the figure below. The column headers indicate the following properties:

- **Application:** Name of the application.
- **Application ID:** Name of the application's executable file.
- **Status:** Current application status (i.e. Running or Not Running).
- **Start With Project:** States whether auto start is enabled for the application (i.e. Yes or No).
- **Start Position:** Specifies the order in which the application will be started (if multiple applications are auto started).
- **Start Delay:** Delay (in seconds) before the application is launched.
- **Stop With Project:** States whether auto stop is enabled for the application (i.e. Yes or No).
- **Stop Position:** Specifies the order in which the application will be shut down (if multiple applications are auto stopped).
- **Stop Delay:** Delay (in seconds) before the application is stopped.
- **Run as Service:** States whether a server is run as an NT service (i.e. Yes or No).
- **Service Autorun:** States whether a server run as an NT service will automatically start every time the computer is restarted (i.e. Yes or No).

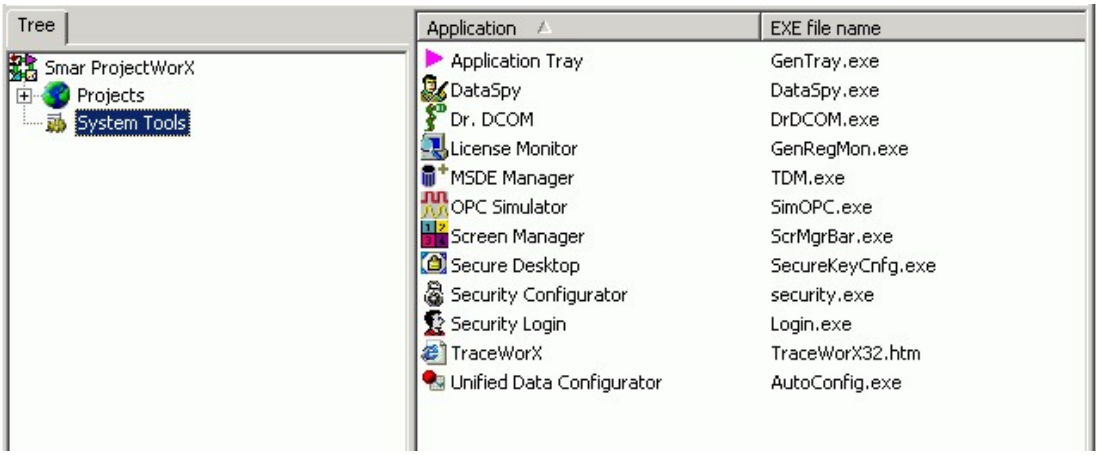
- **Command Line:** Indicates the designated startup file/database for the application (as specified in the active project).

Start with Project	Start Position	Start Delay	Stop with Project	Stop Position	Stop Delay	Run as Service	Service Autorun
No	0	0	No	0	0	No	No
No	0	0	No	0	0	No	No
No	0	0	No	0	0	No	No
No	2	4	No	1	0	Yes	Yes
No	0	0	No	0	0	N/A	N/A
No	0	0	No	0	0	No	No
No	0	0	No	0	0	No	No
Yes	1	0	Yes	2	4	N/A	N/A
No	0	0	No	0	0	N/A	N/A
No	0	0	No	0	0	N/A	N/A
No	0	0	No	0	0	No	No
No	0	0	No	0	0	N/A	N/A
No	0	0	No	0	0	N/A	N/A
No	0	0	No	0	0	No	No

Application Parameters in ProcessView Tray Tree

System Tools

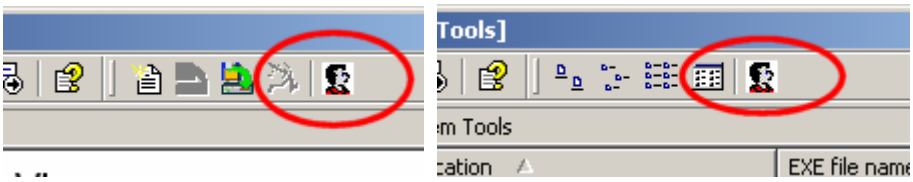
The **System Tools** tree of the ProjectWorX console is a snap-in from which you can conveniently launch all of the available ProcessView tools, as shown in the figure below. To launch a tool, double-click the tool in the right-hand pane of the ProjectWorX console. The tool's executable file is opened.



System Tools Snap-in in ProjectWorX Console

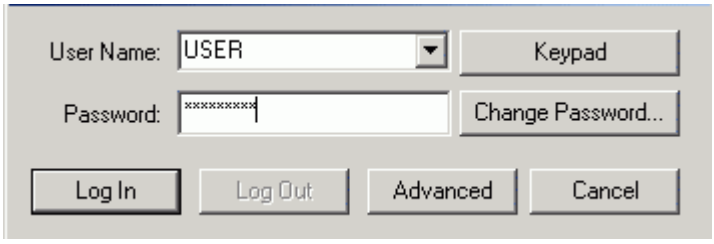
Security Administration

Each of the ProjectWorX snap-ins has a toolbar button that provides direct access to the ICONICS Security Server Login Utility, as shown in the figure below. You can also access the Security Login Utility from the System Tools snap-in.



Security Login Button in Snap-in Toolbars

Clicking the **Security Login** button on the toolbar launches the security login screen, as shown in the figure below.



Logging Into the Security Server

Logging into the Security Server provides the necessary rights to handle all the project operations with a proper security level. The actual access level is always shown in the bottom right-hand corner of the ProjectWorX console status bar, as shown in the figure below. There are three possible access levels:

- Full Access
- Read Only
- <no rights>

Security Status Shown in ProjectWorX Status Bar

Upon startup, ProjectWorX checks for the default security level of the machine. It also checks the ProcessView security settings using the **DEFAULT Application Action** user association list in the Security Configurator to determine the startup access level to ProjectWorX. The security access restrictions affect all the elements in ProjectWorX, so certain ProjectWorX elements are restricted (e.g. menus are grayed out, options are unavailable, etc.) if a user has read-only rights or no rights at all.

NOTE
For complete information about ProcessView security administration, please refer to the Security Configurator and Security Login Help documentation.

Chapter 5

BACKING UP PROJECTS TO VISUAL SOURCESAFE

Visual SourceSafe Integration

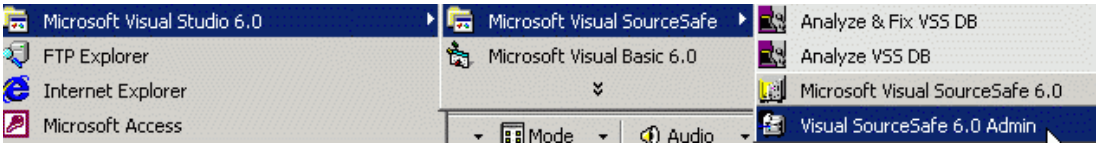
ProjectWorX provides a feature that allows you to back up projects and application files to Microsoft® Visual SourceSafe. Microsoft Visual SourceSafe does not need to be installed on the same node as ProjectWorX. Typically, SourceSafe is installed on a network server, and the clients that check files in and check files out browse over the network to the "SrcSafe.ini" file on the remote (server) node.

NOTE
ProjectWorX does not support direct check-in/check-out SQL databases to Microsoft Visual SourceSafe. Please refer to the Microsoft Visual Studio and Visual SourceSafe help documentation for instructions on how to install and use Visual SourceSafe.

Setting up a User Profile in Visual SourceSafe

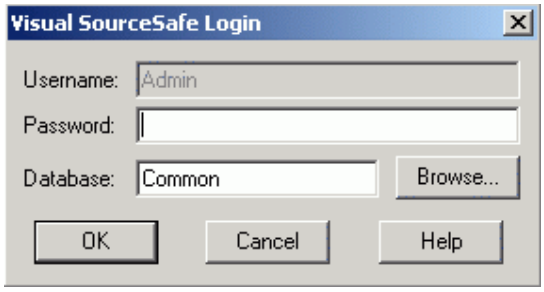
Before you can login to Visual SourceSafe through ProjectWorX and back up your projects, you must configure a user profile in Visual SourceSafe:

1. From the Windows **Start** menu, select **Programs > Microsoft Visual Studio > Microsoft Visual SourceSafe > Visual SourceSafe Administrator,** as shown in the figure below.



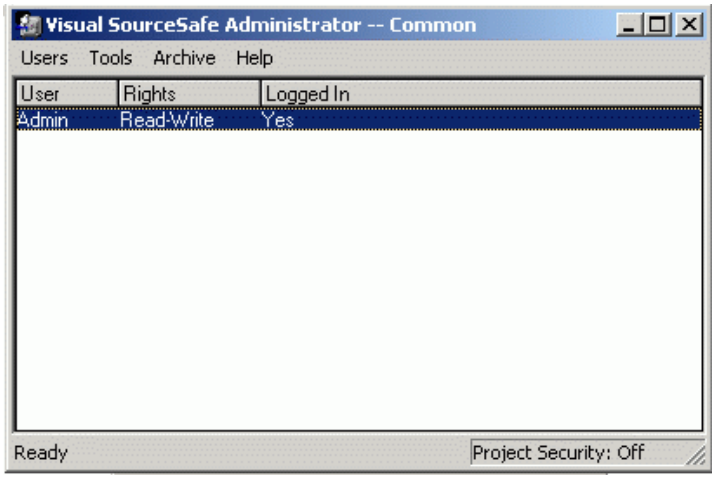
Starting Microsoft Visual SourceSafe

2. In the **Visual SourceSafe Login,** enter an administrator password, as shown in the figure below. Click **OK.**



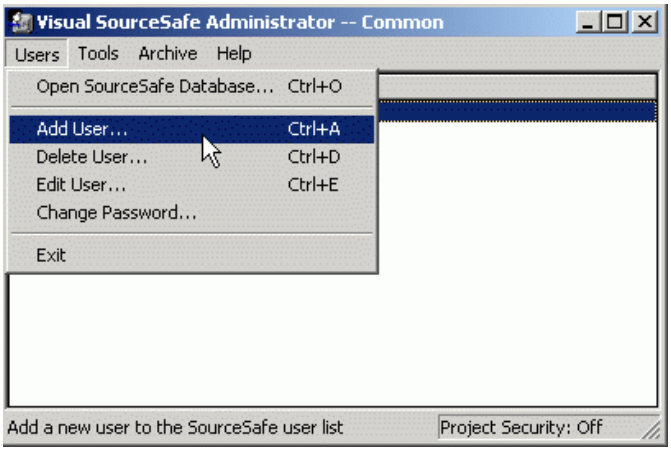
Visual SourceSafe Login

3. The **Visual SourceSafe Administrator** opens showing the user profiles, as shown in the figure below.



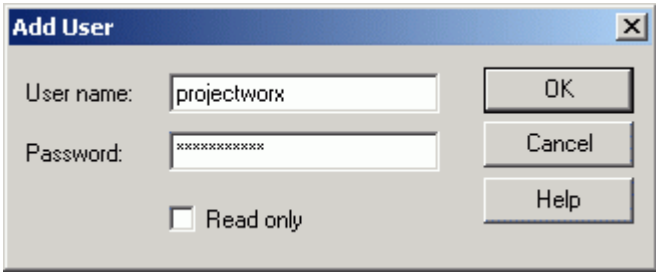
Visual SourceSafe Administrator

4. To add a new user profile, select **Add User** from the **Users** menu, as shown in the figure below.



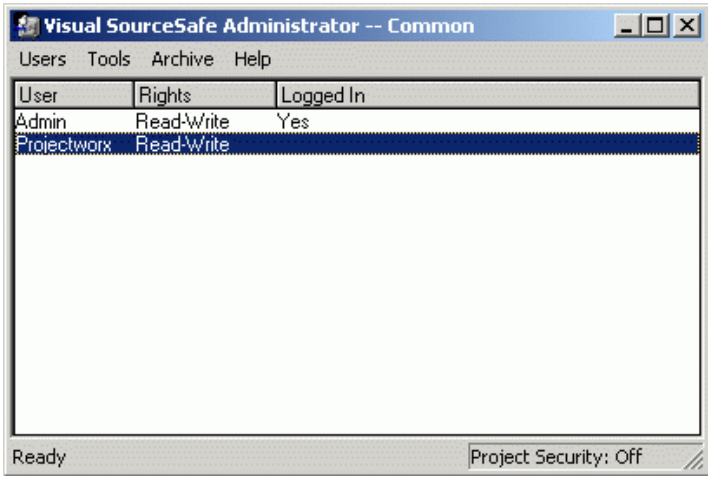
Adding a New User Profile

5. Enter a name and password for the new user, as shown in the figure below. Click **OK.**



Entering a User Name and Password for the New User

6. The new user is added to the **Visual SourceSafe Administrator,** as shown in the figure below.

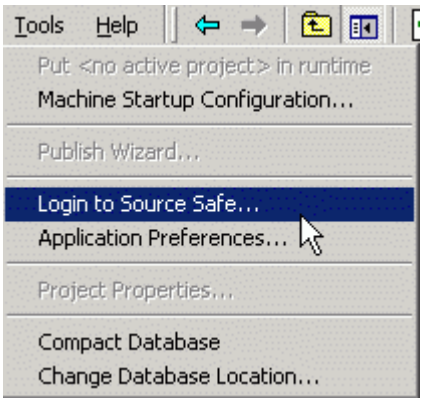


New User Added to Visual SourceSafe Administrator

Logging Into Visual SourceSafe From ProjectWorX

Once you have configured a user login profile in the Visual SourceSafe Administrator, you can back up your ProjectWorX projects to Visual SourceSafe.

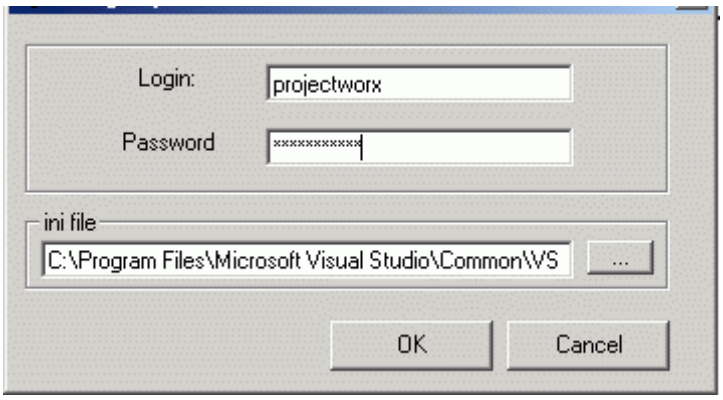
1. In the ProjectWorX console, select **Login to SourceSafe** from the **Tools** menu, as shown in the figure below.



Logging Into Visual SourceSafe Through the ProjectWorX Console

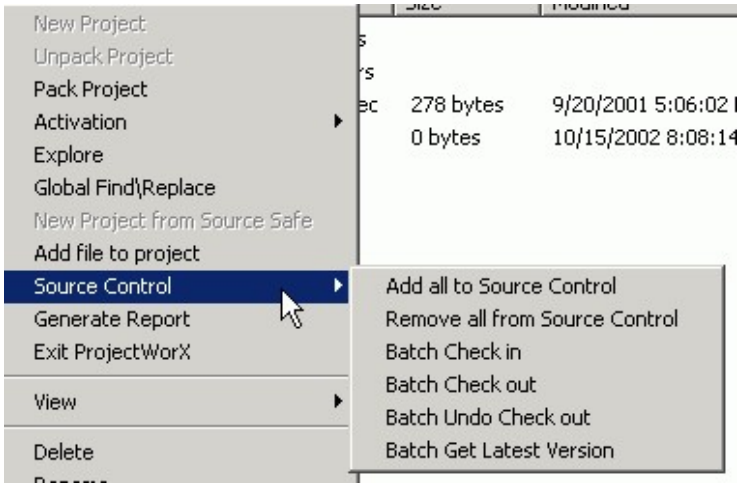
2. Enter your Visual SourceSafe user name and password (specified in the Visual SourceSafe Administrator settings), as shown in the figure below. The .ini file is the SourceSafe initialization file found on the node where SourceSafe is installed. Select an **.ini file** by clicking the **...** button in the Visual SourceSafe Login dialog box and browsing (locally or over a network) for a file. Click **OK** to login to Visual SourceSafe. If any of these parameters is incorrect, you will be notified accordingly.

NOTE
It is recommended that you use the default .ini file provided by Visual SourceSafe.



Visual SourceSafe Login in ProjectWorX

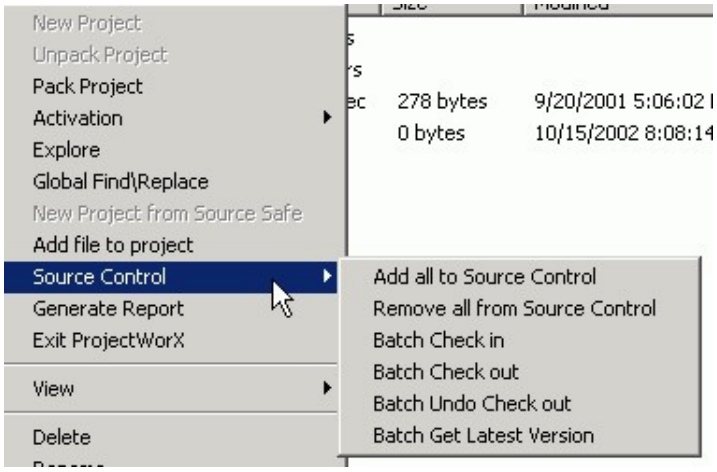
3. Once you login, the **Source Control** menu becomes available on the **Action** menu of the ProjectWorX console when a project is selected, as shown in the figure below.



Source Control Menu Activated in ProjectWorX

Source Control Options

The **Source Control** menu on the **Action** menu of the ProjectWorX console provides options for backing up files to and retrieving files from the Visual SourceSafe database, as shown in the figure below.



Source Control Menu Activated in ProjectWorX

The following general options are available:

- **Add to Source Control:** Makes a read-only copy of a file and backs up the file to the Visual SourceSafe database.
- **Remove from Source Control:** Removes or deletes the file from the Visual SourceSafe database.
- **Check in:** Backs up the latest version of a file to the Visual SourceSafe database.
- **Check out:** Retrieves a version of a file from the Visual SourceSafe database.
- **Undo check-out:** Nullifies the check-out of a file from the Visual SourceSafe database.
- **Get latest version:** Retrieves the most recent version of a file from the Visual SourceSafe database.
- **History:** Provides information about when a file was created and last modified as well as any comments or labels associated with each version of the file. Also specifies which version of the file to retrieve from the Visual SourceSafe database.

The Source Control options in ProjectWorX can be applied to the following denominations of files:

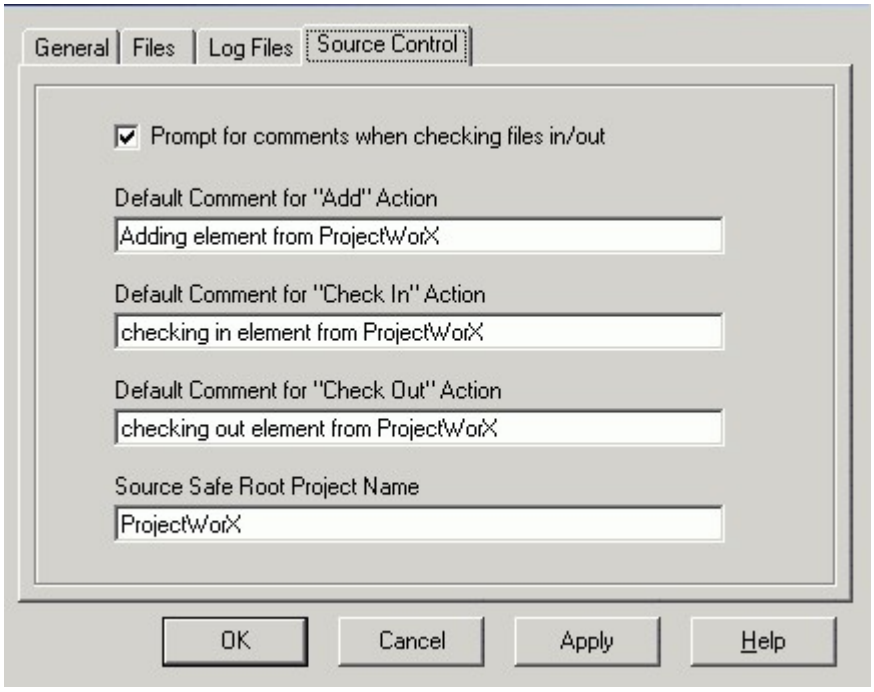
- Individual files
- Groups of application files
- Entire projects

NOTE
You must be logged into Visual SourceSafe in order to access the Source Control options. If you are not logged in, the Source Control menu is not available in the ProjectWorX console.

Comments for Source Control Actions

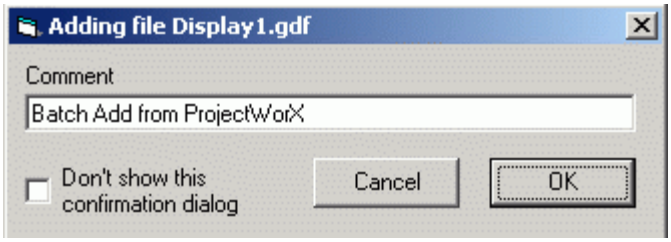
For each Source Control action (e.g. add, check-out, check-in, etc.), ProjectWorX prompts you to enter a comment to document the action because the **Prompt for Comments** option is selected by default in the **Source Control** tab of the **Application Preferences** dialog box in the ProjectWorX console, as shown in the figure below. This way you have a record of each action and a detailed history for each file version in the Visual SourceSafe database.

NOTE
You can disable the **Prompt for Comments** in the **Source Control** tab, but this is not recommended.



Prompt for Comments Option Enabled in Application Preferences

ProjectWorX provides a generic comment for each action, such as the example comment shown in the figure below. You can use this comment or type a new comment to associate with the file.



Adding a Comment for Source Control Actions

Adding Files to Visual SourceSafe

The **Add to Source Control** option on the **Source Control** menu allows you to add individual files, groups of application files, and entire projects in the ProjectWorX console to the Visual SourceSafe database.

When you add a file to source control, the icon for the file will change. An item under source control that is checked in contains a yellow box in the lower-left corner. An item that is under source control and checked out contains a checkmark in the yellow box, as shown below.

- Not under source control

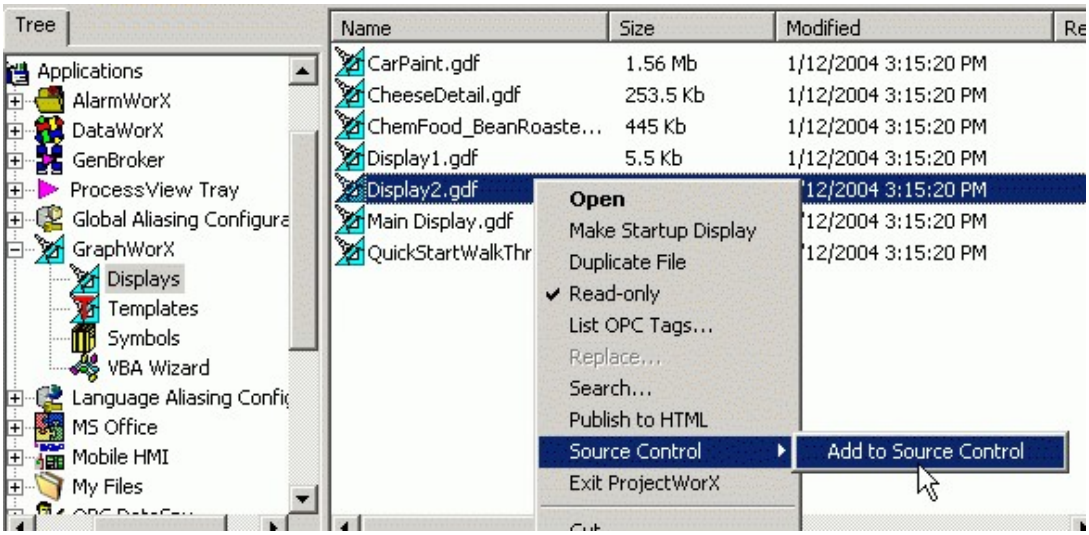
- Checked into SourceSafe

- Checked out of SourceSafe

Adding Individual Files to Visual SourceSafe

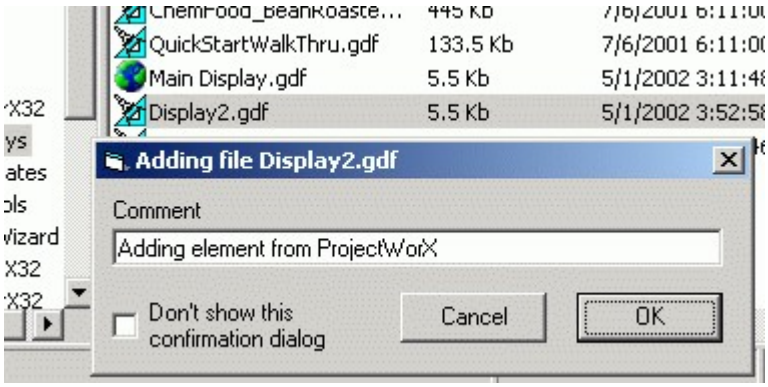
To add a single file to Visual SourceSafe from ProjectWorX:

1. Right-click the file in the ProjectWorX console and select **Source Control > Add to Source Control,** as shown in the figure below.



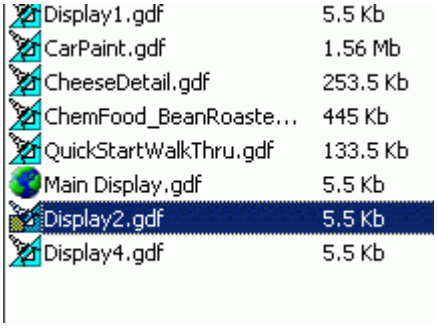
Adding a File to Visual SourceSafe

2. Type a comment to document the addition of the file to Visual SourceSafe, as shown in the figure below, and then click **OK.**



Adding a Comment

3. Once the file is added to the Visual SourceSafe database, the icon next to the file name is marked with a yellow tag, as shown in the figure below. The file automatically becomes read-only (it cannot be modified).

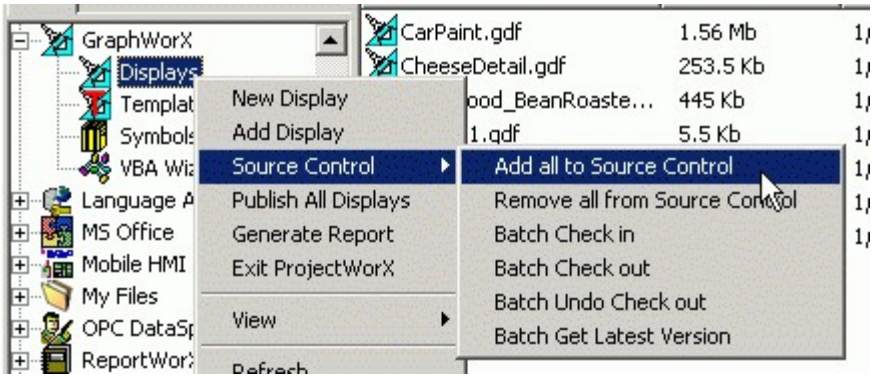


File Added to Visual SourceSafe

Adding Groups of Application Files to SourceSafe

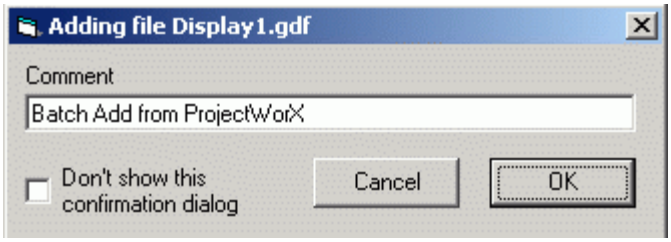
Just as you can add individual files to SourceSafe, ProjectWorX also allows you to add groups of application files to SourceSafe:

1. Right-click the file group (e.g. GraphWorX Displays) in the **Applications** tree in the ProjectWorX console and select **Source Control > Add All to Source Control,** as shown in the figure below.



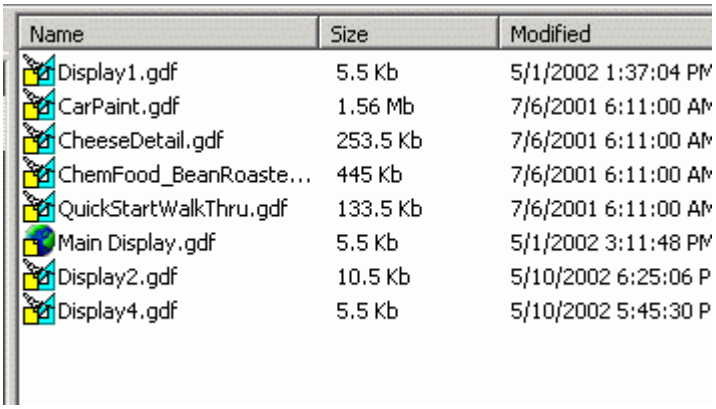
Adding a Group of Files to SourceSafe

2. Type a comment to document the addition of the file group to Visual SourceSafe, as shown in the figure below, and then click **OK.**



Adding a Comment

3. The entire group of files is added to the Visual SourceSafe database. The icon next to each file name is marked with a yellow tag, as shown in the figure below. The files automatically become read-only (they cannot be modified).

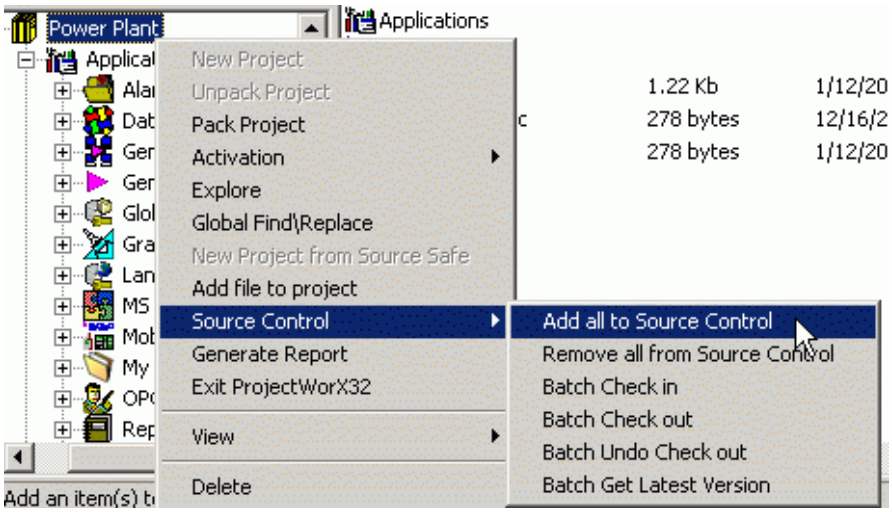


Group of Files Added to Visual SourceSafe

Adding Projects to Visual SourceSafe

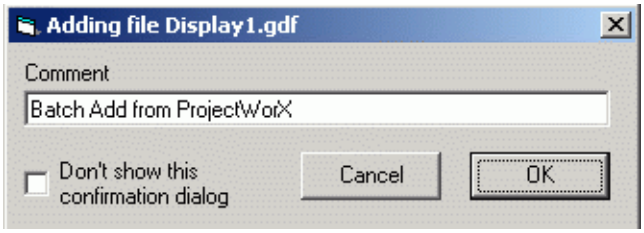
Just as you can add individual files and groups of files to Visual SourceSafe, ProjectWorX also allows you to add all the files in a project to Visual SourceSafe at once:

1. Right-click the project (e.g. Power Plant) in the **Applications** tree in the ProjectWorX console and select **Source Control > Add All to Source Control,** as shown in the figure below.



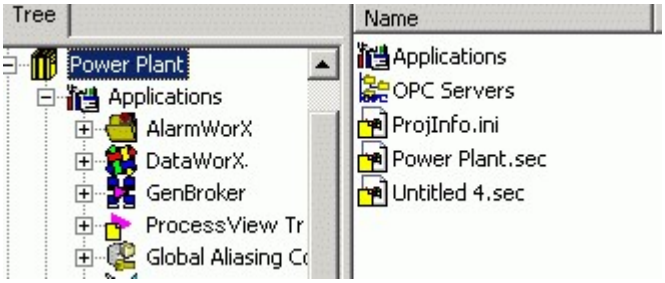
Adding a Project to SourceSafe

2. Type a comment to document the addition of the project to Visual SourceSafe, as shown in the figure below, and then click **OK.**



Adding a Comment

3. All files in the project are added to the Visual SourceSafe database. The icon next to each file name is marked with a yellow tag, as shown in the figure below. The files automatically become read-only (they cannot be modified).

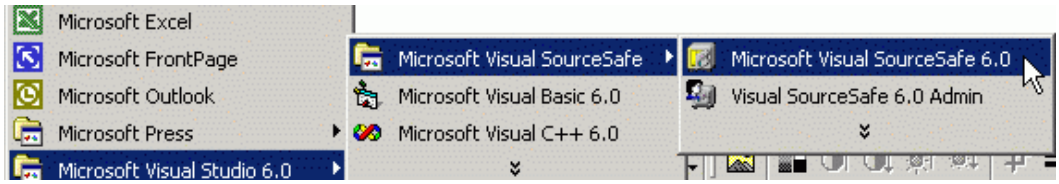


All Project Files Added to Visual SourceSafe

Viewing Files Added to Visual SourceSafe

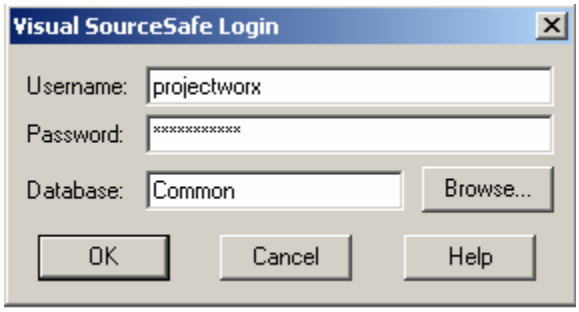
To view your files in Visual SourceSafe:

1. From the Windows **Start** menu, select **Programs > Microsoft Visual Studio > Microsoft Visual SourceSafe > Microsoft Visual SourceSafe,** as shown in the figure below.



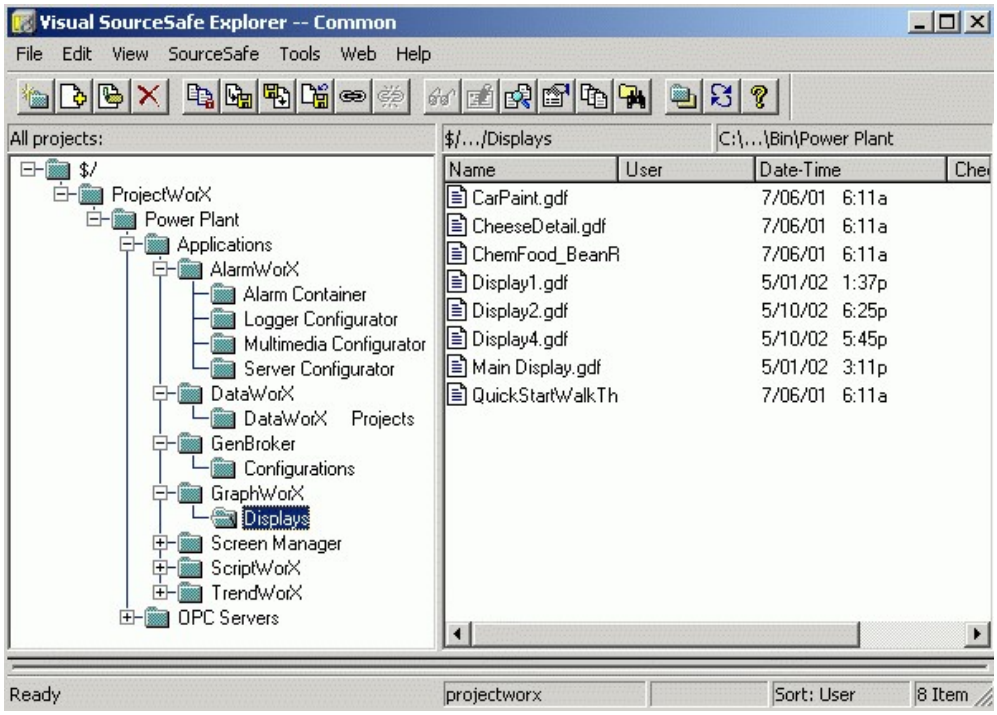
Opening Microsoft Visual SourceSafe

2. In the **Visual SourceSafe Login,** enter a user name and password, as shown in the figure below. Click **OK.**



Visual SourceSafe Login

3. The Visual SourceSafe Explorer opens, as shown in the figure below. As you can see, the project directory structure of the ProjectWorX console is preserved in the Visual SourceSafe Explorer so you can easily locate the files you have added to Visual SourceSafe.



Viewing Files in the Visual SourceSafe Explorer

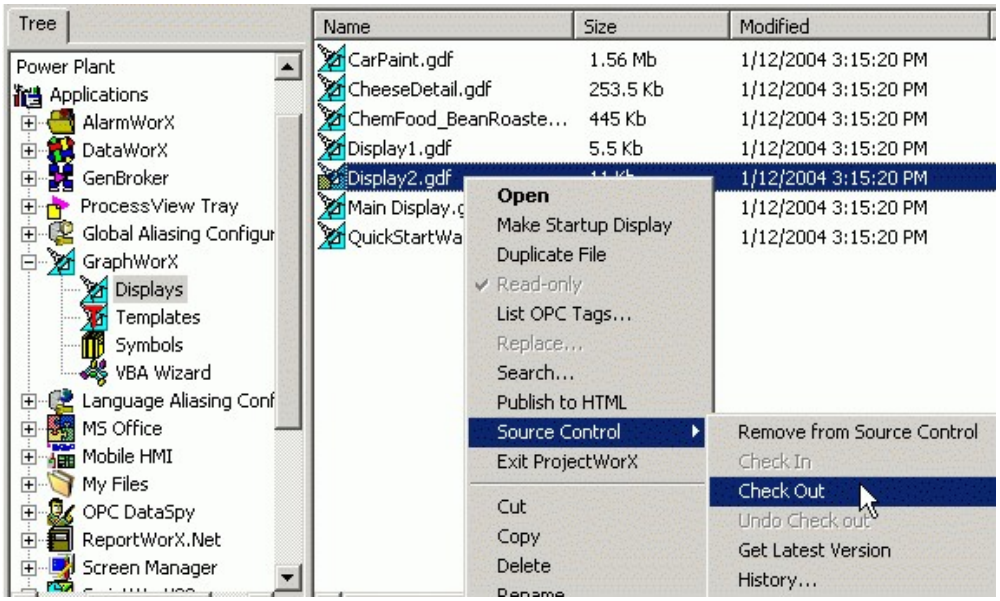
Checking Files out of Visual SourceSafe

Once a file is added to the Visual SourceSafe, the file becomes read-only. In order to modify the file, you must check it out of Visual SourceSafe. Checking out a file does not remove the file from the Visual SourceSafe database. Instead ProjectWorX retrieves a version of the file and removes the read-only status from the file. You can check out both individual files and batches of files.

Checking Individual Files out of Visual SourceSafe

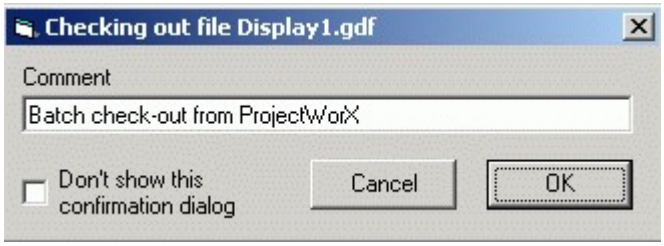
To check a single file out of Visual SourceSafe:

1. Right-click the file in the ProjectWorX console and select **Source Control > Check Out,** as shown in the figure below.



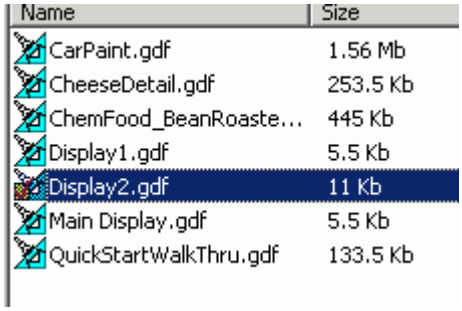
Checking a File out of SourceSafe

2. Type a comment to document the file check-out, as shown in the figure below, and then click **OK.**



Adding a Comment Upon File Check-out

3. Once the file is checked out of the Visual SourceSafe database, a red check mark is appears on the icon next to the file name, as shown in the figure below. The file's read-only status is temporarily removed so it can be modified. The read-only status is not restored until the file is checked back into the Visual SourceSafe database.

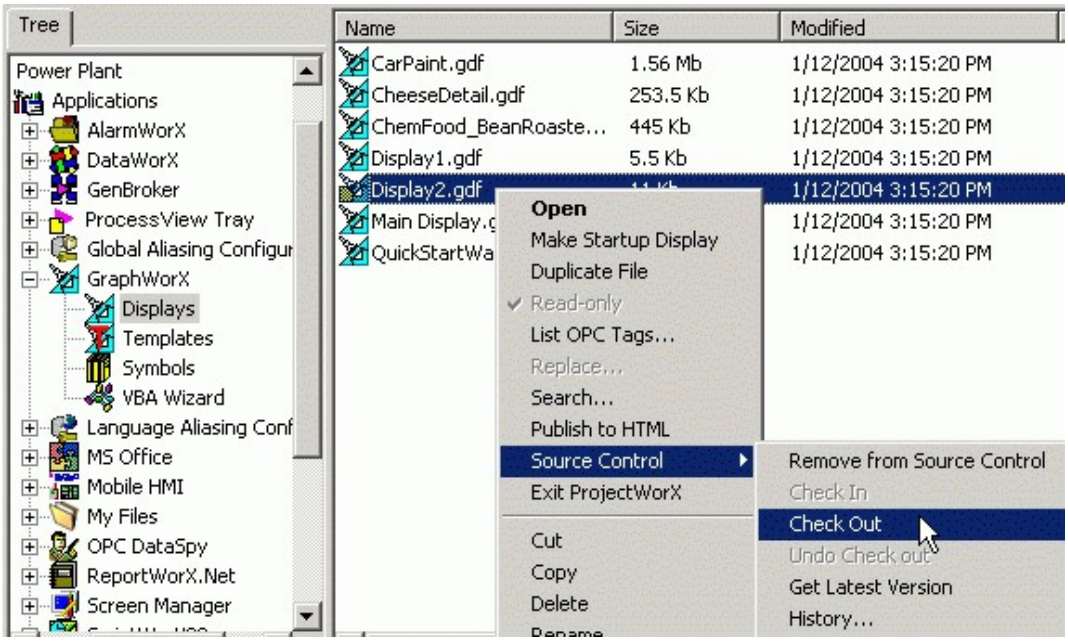


File Checked out of Visual SourceSafe

Checking Batches of Files out of Visual SourceSafe

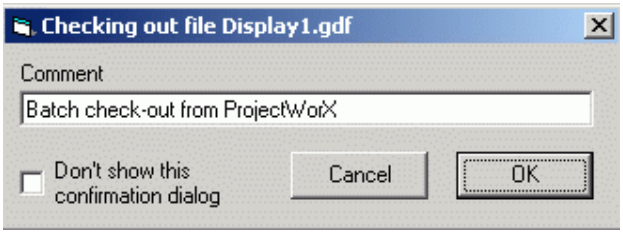
To check a batch of files (i.e. files for an entire group or project) out of Visual SourceSafe:

1. Right-click the group or project in the ProjectWorX console and select **Source Control > Batch Check Out,** as shown in the figure below.



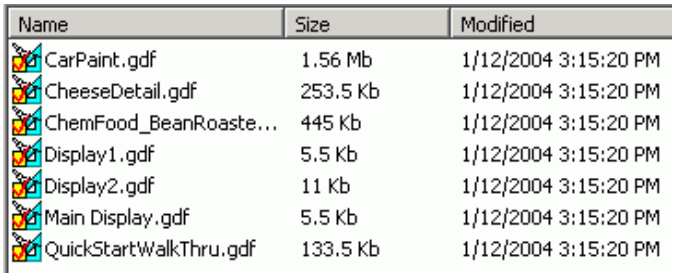
Checking a Batch of Files out of SourceSafe

2. Type a comment to document the batch check-out, as shown in the figure below, and then click **OK.**



Adding a Comment Upon Batch Check-out

3. Once files are checked out of the Visual SourceSafe database, a red check mark is appears on the icon next to each file name, as shown in the figure below. Each file's read-only status is temporarily removed so it can be modified. The read-only status is not restored until the file is checked back into the Visual SourceSafe database.

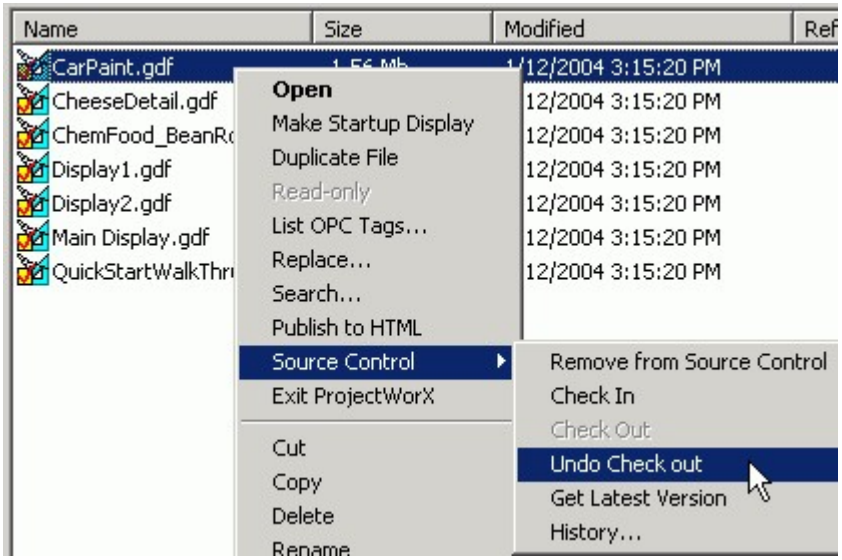


Batch of Files Checked out of Visual SourceSafe

Undoing File Check Out From SourceSafe

If you check a file out of SourceSafe and later decide you do not want to check it out, you can nullify the check out by right-clicking the file in the ProjectWorX console and selecting **Source Control > Undo Check Out,** as shown in the figure below.

NOTE
Select **Batch Undo Check Out** to nullify check-out for a group of files.



Undoing File Check out From SourceSafe

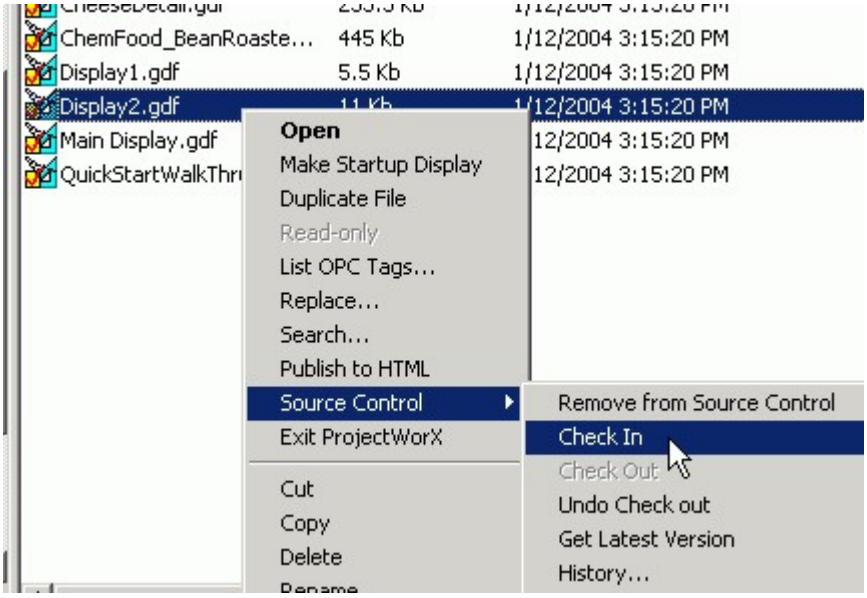
Checking Files Into Visual SourceSafe

Once a file is checked out of Visual SourceSafe, the read-only status is temporarily removed so it can be modified. To back up the recent changes to the file and to restore the file's read-only status, you must check the file back into the Visual SourceSafe. You can check in both individual files and batches of files.

Checking Individual Files Into Visual SourceSafe

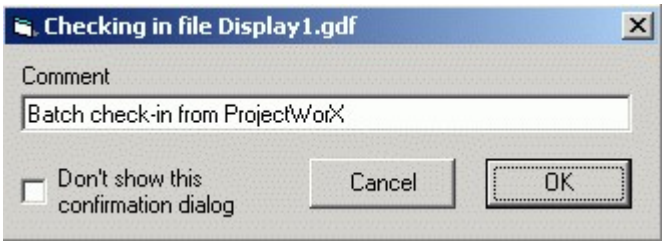
To check a single file into Visual SourceSafe:

1. Right-click the file in the ProjectWorX console and select **Source Control > Check In,** as shown in the figure below.



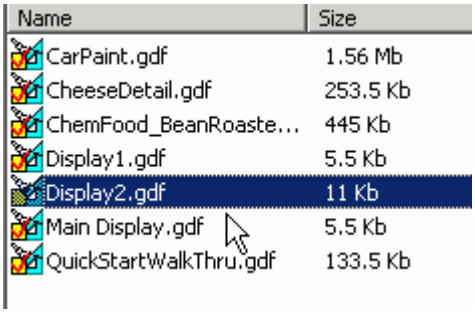
Checking a File Into SourceSafe

2. Type a comment to document the file check-in, as shown in the figure below, and then click **OK.**



Adding a Comment Upon File Check-in

3. Once the file is checked back into the Visual SourceSafe database, the red check mark is removed from the icon next to the file name, as shown in the figure below. The file's read-only status is restored so it cannot be modified.

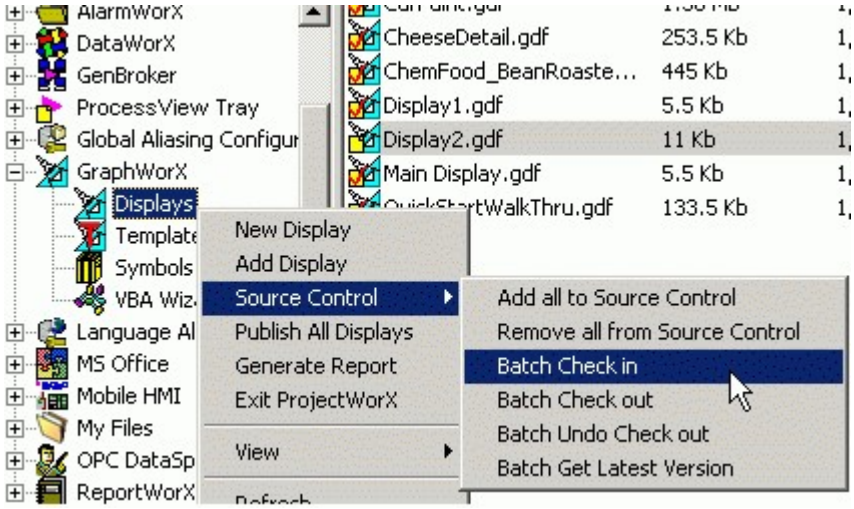


Project File Checked Into Visual SourceSafe

Checking Batches of Files Into Visual SourceSafe

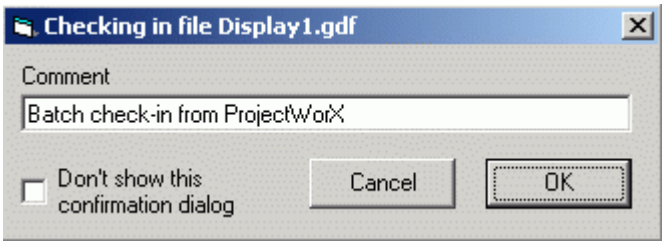
To check a batch of files (i.e. files for an entire group or project) into Visual SourceSafe:

1. Right-click the group or project in the ProjectWorX console and select **Source Control > Batch Check In,** as shown in the figure below.



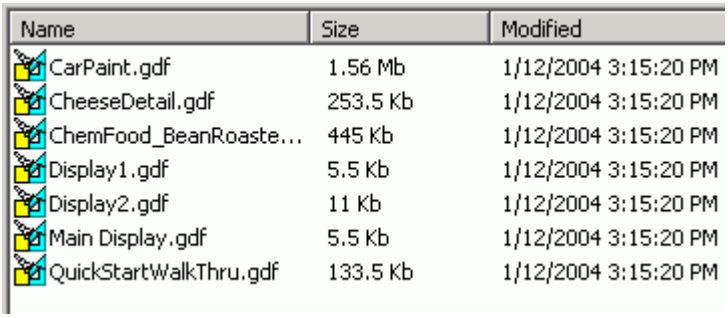
Checking a Batch of Files Into SourceSafe

2. Type a comment to document the batch check-in, as shown in the figure below, and then click **OK.**



Adding a Comment Upon File Check-in

3. Once the files are checked back into the Visual SourceSafe database, the red check mark is removed from the icon next to each file name, as shown in the figure below. Each file's read-only status is restored so it cannot be modified.



Name	Size	Modified
CarPaint.gdf	1.56 Mb	1/12/2004 3:15:20 PM
CheeseDetail.gdf	253.5 Kb	1/12/2004 3:15:20 PM
ChemFood_BeanRoaste...	445 Kb	1/12/2004 3:15:20 PM
Display1.gdf	5.5 Kb	1/12/2004 3:15:20 PM
Display2.gdf	11 Kb	1/12/2004 3:15:20 PM
Main Display.gdf	5.5 Kb	1/12/2004 3:15:20 PM
QuickStartWalkThru.gdf	133.5 Kb	1/12/2004 3:15:20 PM

Project Files Checked Into Visual SourceSafe

Retrieving File Versions From Visual SourceSafe

One of the major advantages of using Visual SourceSafe to back up your application files in ProjectWorX is that Visual SourceSafe database maintains multiple versions of the same file. Every version of a file has a version number with a date and time as well as any relevant comments or labels. Each time the file is modified, resaved, and then checked back into SourceSafe, the previous version of the file is not overwritten. Instead each version is stored separately so you can refer to previous versions of the file as needed.

Two Source Control options in the ProjectWorX console allow you to specify which version of a file to retrieve from the Visual SourceSafe database:

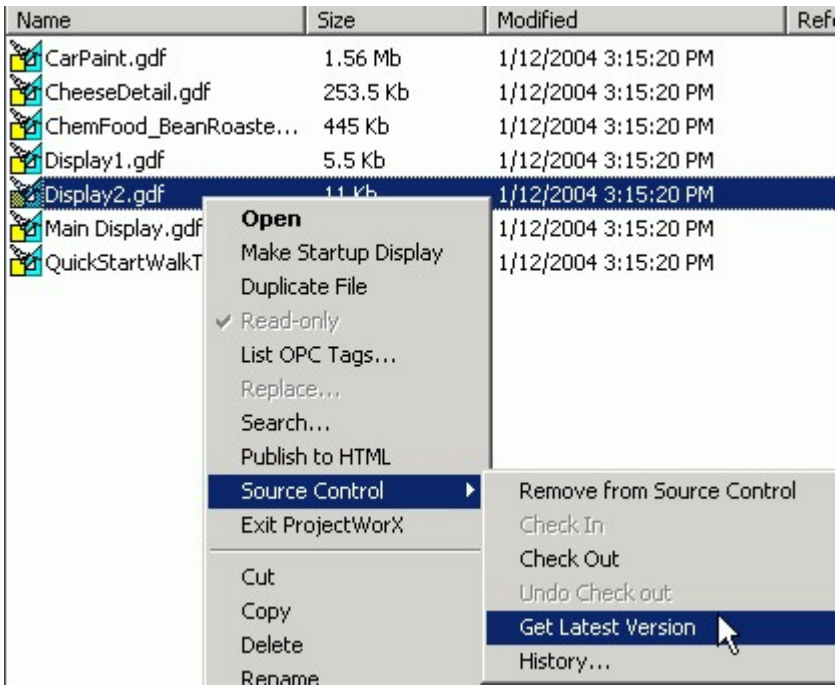
- **Get latest version:** Retrieves the most recent version of a file from the Visual SourceSafe database.
- **History:** Provides information about when a file was created and last modified as well as any comments associated with each version of the file. Also specifies which version of the file to retrieve from the Visual SourceSafe database.

Getting the Latest File Version

To retrieve the most recent version of a file from the Visual SourceSafe database:

1. Right-click the group or project in the ProjectWorX console and select **Source Control > Get Latest Version,** as shown in the figure below.

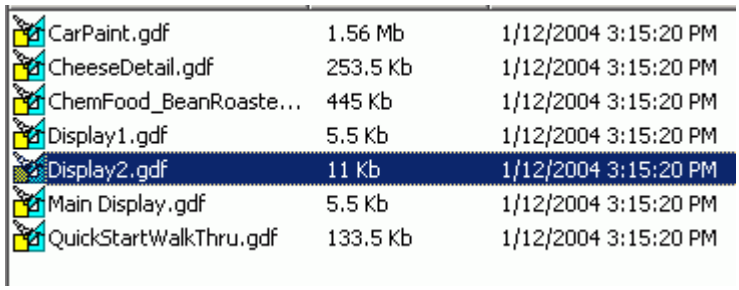
NOTE
To get the latest version for a batch of files, select **Batch Get Latest Version** from the **Source Control** menu.



Getting the Latest Version of a File From SourceSafe

2. As you can see in the figure below, the latest version is retrieved and the date of the file is refreshed.

NOTE
Retrieving the latest file version is not the same as checking a file out of the Visual SourceSafe database. When the latest version of the file is retrieved, the file maintains its read-only status.

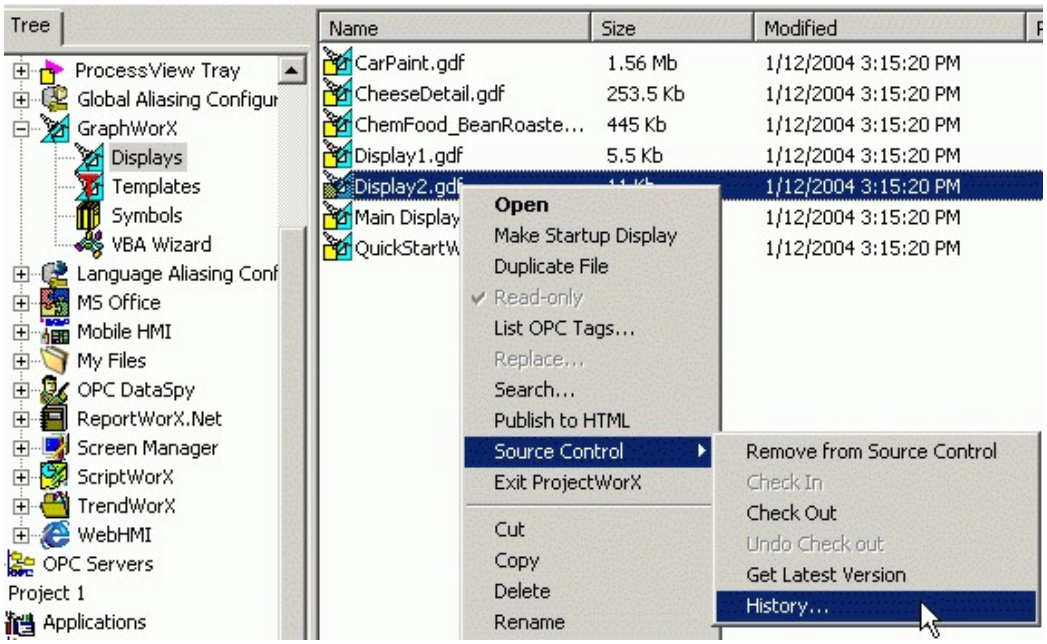


Latest Version of File Retrieved From SourceSafe

Viewing File History

The History option in the ProjectWorX Source Control provides information about when a file was created and last modified as well as any comments or labels associated with each version of the file. To review the history for a file:

1. Right-click the file in the ProjectWorX console and select **Source Control > History,** as shown in the figure below.



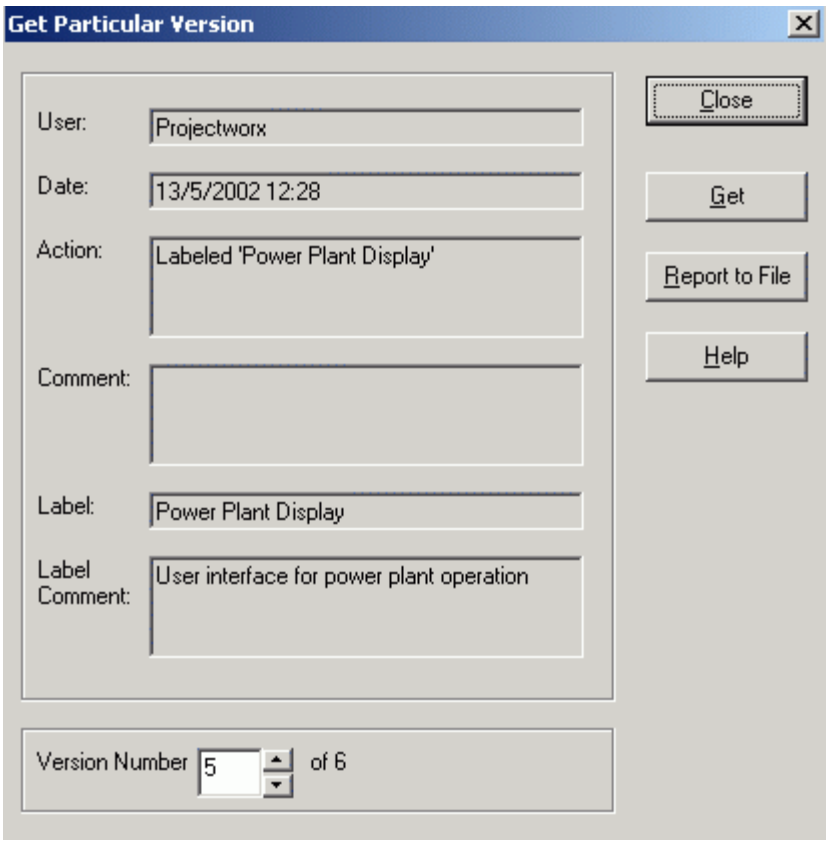
Viewing the History for a File

2. The history dialog box opens, as shown in the figure below, showing the following information about the file:

- **Version Number:** Lists all versions of the file from oldest to most recent (i.e. version "1" is the oldest). To view the history of a different version of the file, click the up and down arrows. To retrieve the currently selected version, click the **Get** button.
- **User:** Name of the user currently logged into Visual SourceSafe.
- **Date:** Shows the date and time of the currently selected file version.
- **Action:** Documents the last type of modification to the file version.
- **Comment:** Shows any comments entered for each version's (e.g. check-in, check-out, etc.)
- **Label:** Shows a label for each version (if applicable).

NOTE
To make a version easier to identify, you can assign it a label in Visual SourceSafe (any string up to 31 characters) and refer to the version by its label. Each time the **Label** command is used in Visual SourceSafe, a new version of the selected file is created, and the label is associated with that version.

- **Label Comment:** Shows any additional comments added while creating a file version label in Visual SourceSafe.

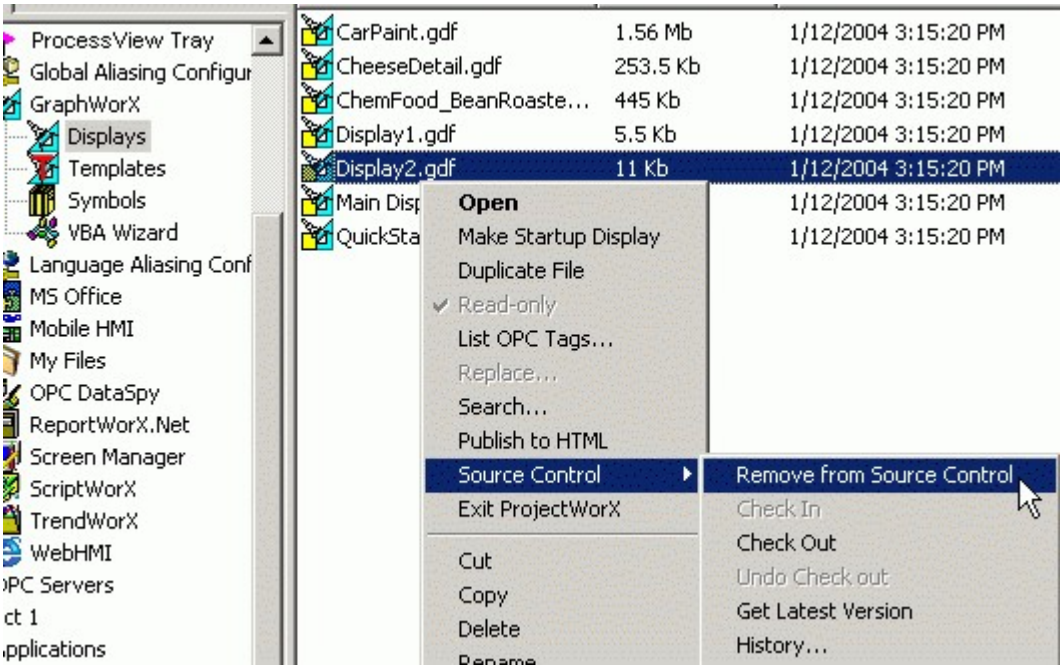


Viewing File History and Version Information

Removing Files From Visual SourceSafe

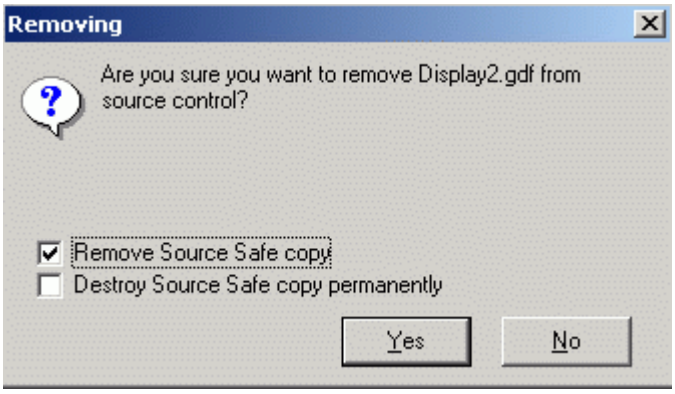
To remove a file from Visual SourceSafe:

1. Right-click the file in the ProjectWorX console and select **Source Control > Remove From Source Control,** as shown in the figure below.



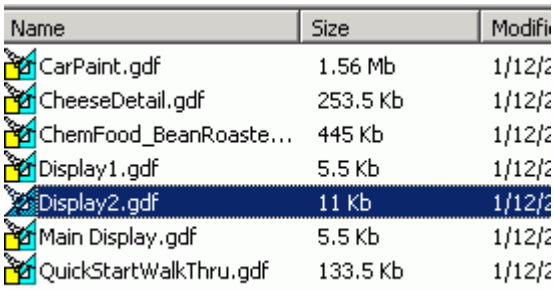
Removing a File From SourceSafe

2. A message box appears asking you if you want to remove the file. If **Remove SourceSafe Copy** is checked, the file is removed from the Visual SourceSafe Explorer but a copy of the file remains in the Visual SourceSafe database. If **Destroy SourceSafe copy permanently** is checked, file is permanently deleted from the SourceSafe database and cannot be retrieved. Click **Yes** to proceed with the file removal.



Confirming File Removal

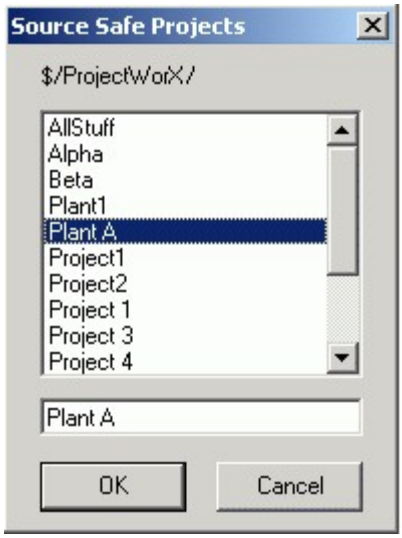
3. Once the file is removed from Visual SourceSafe, the yellow tag is removed from the file icon in the ProjectWorX console, as shown in the figure below, and the file's read-only status is removed.



File Removed From Visual SourceSafe

Creating a Project From Visual SourceSafe

The **Create Project from SourceSafe** command on the **Action** menu of the ProjectWorX console is available only when you are logged into Visual SourceSafe. Selecting this menu command opens a list of all project names residing in the “ProjectWorX” section of Visual SourceSafe, as shown in the figure below, allowing you to choose which project to create.



Dialog Showing Available SourceSafe Projects

Once you select a name, ProjectWorX will create the desired project, recursively get all the files contained within the SourceSafe project, and then add the files to the newly created ProjectWorX project. All added files are automatically marked as "under source control."

NOTE
If the "ProjectWorX" root SourceSafe folder is changed in the Application Preferences, it will be changed here as well, and ProjectWorX will look in the correctly modified root folder for any projects.

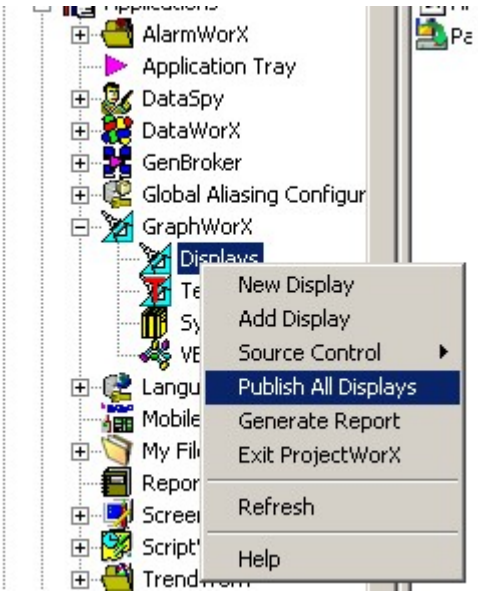
Chapter 6

WEB PUBLISHING IN PROJECTWORX

Using the Web Publishing Wizard

The Web Publishing Wizard can be accessed through ProjectWorX console, allowing you to easily export/publish one or more GraphWorX (.gdf), AlarmWorX container (.a32), and TrendWorX container (.t32) display files within a project to a Web server. The following trees of each project include an option to publish a single display or multiple displays in the project:

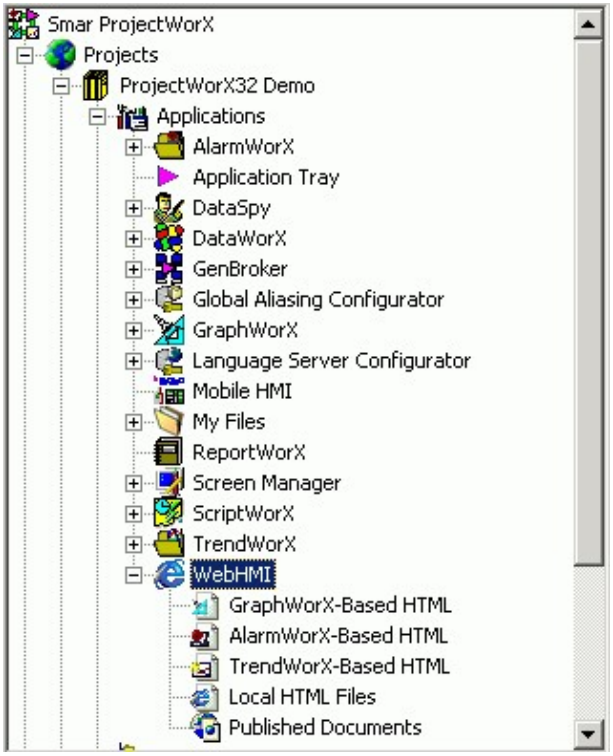
- Applications/GraphWorX/Displays (as shown in the example figure below)
- Applications/AlarmWorX/Alarm Container
- Applications/TrendWorX/Trend Container



Publishing Displays From the ProjectWorX Console

The **WebHMI** tree under the **Applications** tree for each project in the ProjectWorX console, shown in the figure below, manages Web publishing for the entire project. From here you can right-click and publish HTML files to a Web server. The WebHMI tree includes the following categories:

- GraphWorX-Based HTML
- AlarmWorX-Based HTML
- TrendWorX-Based HTML
- Local HTML Files
- Published Documents

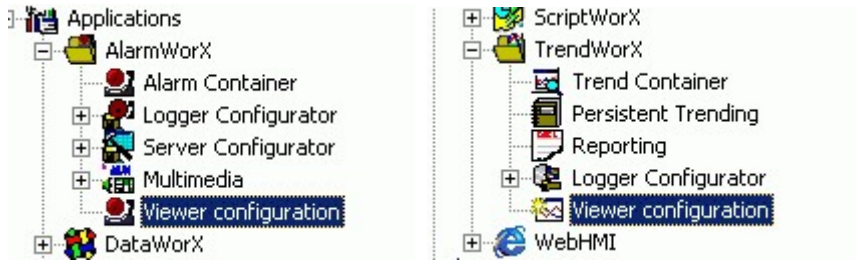


WebHMI Tree in ProjectWorX Console

Web Publishing From Alarm and Trend Viewer Files

ProjectWorX includes support for publishing TrendWorX container files (.t32) and AlarmWorX container files (.a32). The Web Publishing Wizard that is executed is identical to the wizard used for GraphWorX displays and identical to the wizard used when publishing directly form TrendWorX or AlarmWorX.

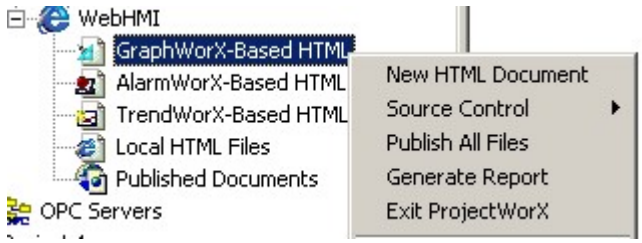
Unlike publishing GraphWorX displays, publishing trend and alarm files has the side effect of creating intermediate (.v32 and .awv) files. It is actually these files, and not the container files, that are referenced by the created HTML page. These files are contained in the **AlarmWorX Viewer Configuration** and **TrendWorX Viewer Configuration** trees, as shown in the figure below. After the Web Publishing Wizard has been executed, these generated intermediate files are automatically added to these two trees. This is critical for ProjectWorX's ability to publish local HTML files with the intention of later publishing the HTML files from the local folders to a Web Site.



Viewer Configuration File Sections of the AlarmWorX and TrendWorX Trees

GraphWorX-Based HTML

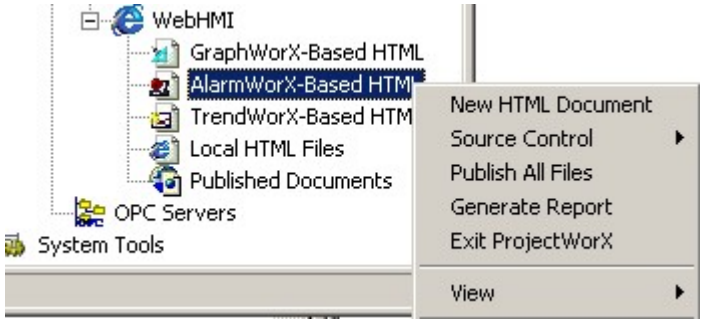
The **GraphWorX-Based HTML** subtree of the WebHMI tree, shown in the figure below, contains HTML files generated from exported GraphWorX displays. These HTML files have embedded code for accommodating a GraphWorX Viewer ActiveX Control. Any requested local copy of a GraphWorX-based HTML file generated from the Web Publishing Wizard is stored in this folder. (See the "Web Publishing Wizard" section below for more information on exporting and publishing HTML files from GraphWorX displays.) The ProjectWorX database maintains a record of which local GraphWorX display (.gdf) files each of these HTML files depends on. Documents in this folder can be added, removed, copied, pasted, opened, edited, added to Microsoft Visual SourceSafe, searched, replaced, and packed the same way items from other categories can.



GraphWorX-Based HTML Subtree

AlarmWorX-Based HTML

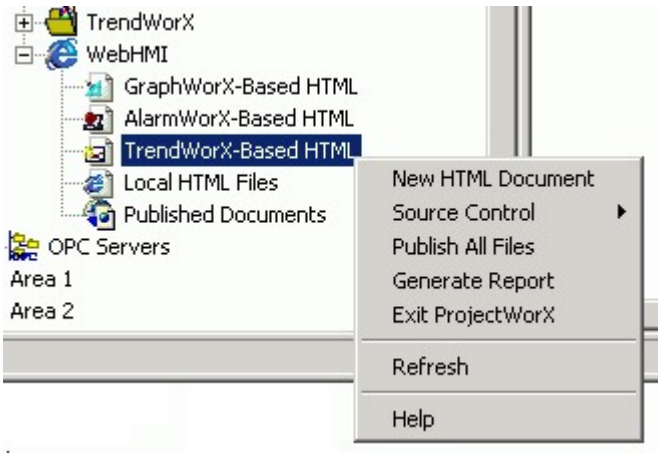
The **AlarmWorX-Based HTML** subtree of the WebHMI tree, shown in the figure below, contains HTML files generated from exported AlarmWorX container displays. These HTML files have embedded code for accommodating an AlarmWorX Viewer ActiveX Control. Any requested local copy of an AlarmWorX-based HTML file generated from the Web Publishing Wizard is stored in this folder. (See the "Web Publishing Wizard" section below for more information on exporting and publishing HTML files from AlarmWorX displays.) The ProjectWorX database maintains a record of which local AlarmWorX container (.a32) files each of these HTML files depends on. Documents in this folder can be added, removed, copied, pasted, opened, edited, added to Microsoft Visual SourceSafe, searched, replaced, and packed the same way items from other categories can.



AlarmWorX-Based HTML Subtree

TrendWorX-Based HTML

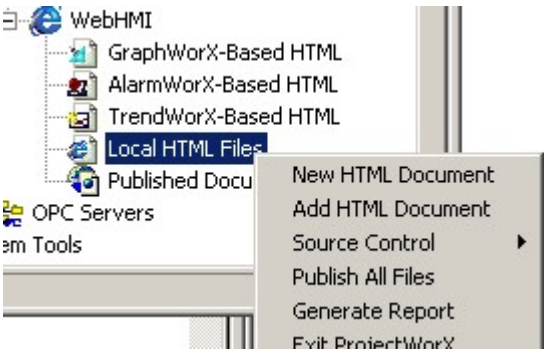
The **TrendWorX-Based HTML** subtree of the WebHMI tree, shown in the figure below, contains HTML files generated from exported TrendWorX container displays. These HTML files have embedded code for accommodating a TrendWorX Viewer ActiveX Control. Any requested local copy of an TrendWorX-based HTML file generated from the Web Publishing Wizard is stored in this folder. (See the "Web Publishing Wizard" section below for more information on exporting and publishing HTML files from TrendWorX displays.) The ProjectWorX database maintains a record of which local TrendWorX container (.t32) files each of these HTML files depends on. Documents in this folder can be added, removed, copied, pasted, opened, edited, added to Microsoft Visual SourceSafe, searched, replaced, and packed the same way items from other categories can.



TrendWorX-Based HTML Subtree

Local HTML Files

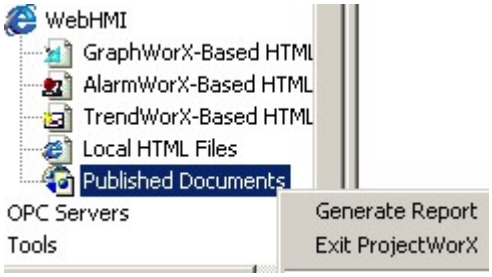
The **Local HTML Files** subtree of the WebHMI tree stores basic HTML files that were not generated from the Web Publishing Wizard. Here you can add, delete, edit, and maintain various HTML files.



Local HTML Files Subtree

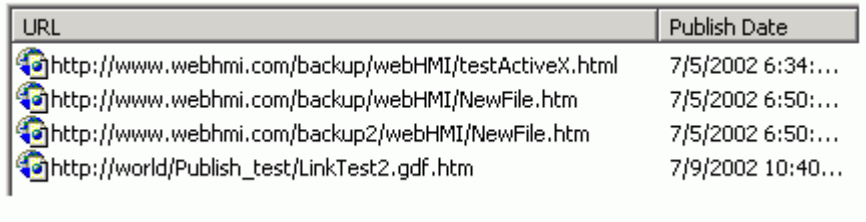
Published Documents

The **Published Documents** subtree of the WebHMI tree, shown in the figure below, maintains a list of all HTML files that have been exported/published from ProjectWorX.



Published Documents Subtree

In the right-hand pane of the ProjectWorX Console, each item is listed as a URL with the date it was published, as shown in the figure below. For information about publishing files from ProjectWorX, please see "Using the Web Publishing Wizard."

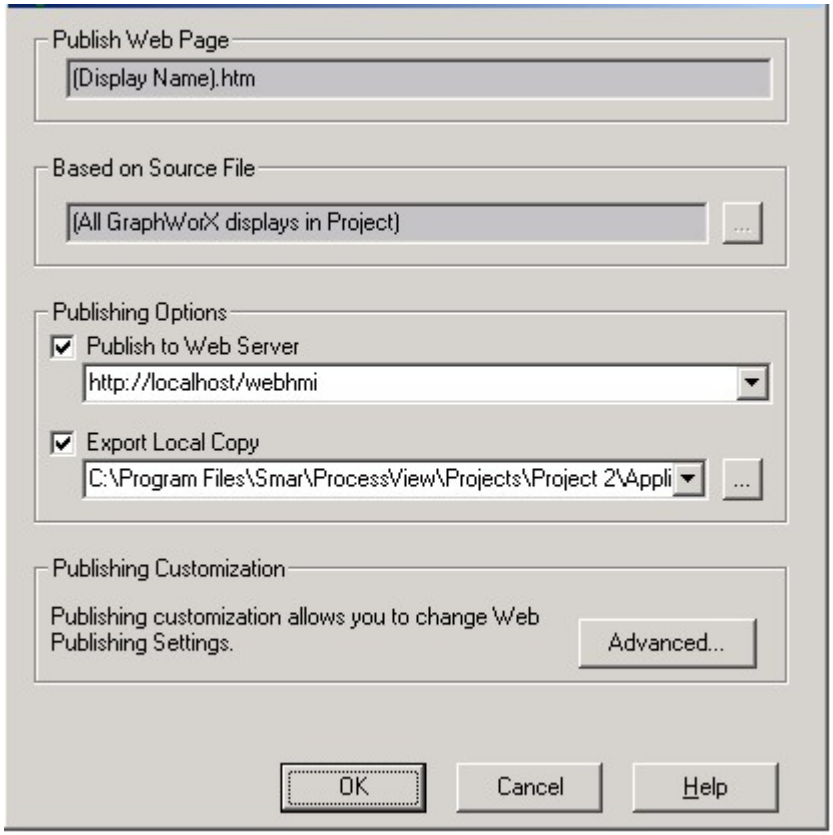


List of All Documents Published From ProjectWorX

Launching the Web Publishing Wizard in ProjectWorX

The Web Publishing Wizard in ProjectWorX performs two basic operations:

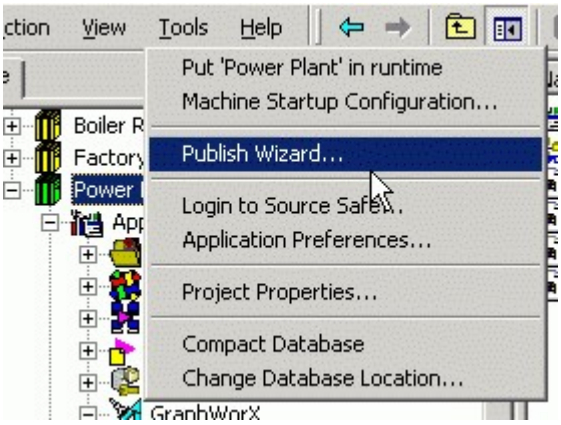
1. The Wizard creates HTML files based on user-specified GraphWorX display (.gdf) files, AlarmWorX container (.a32) files, and TrendWorX container (.t32) files.
2. The Wizard then either "exports" (saves) the HTML files to a user-specified directory on the local drive and/ or "publishes" (uploads) the HTML file to a user-specified Web server URL address (i.e. over the Internet or an intranet).



Web Publishing Wizard in ProjectWorX Console

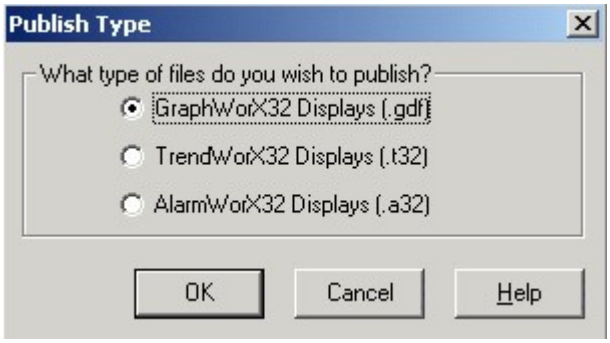
You can open the Web Publishing Wizard dialog from the ProjectWorX console in the following ways:

- Select the project root and then choose **Publish Wizard** from the **Tools** menu, as shown in the figure below.



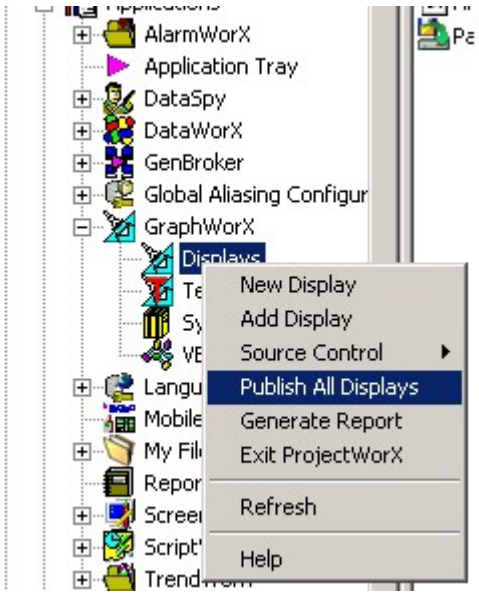
Opening the Publishing Wizard From the Tools Menu

Choose the type of file to publish, as shown in the figure below. In this case, both the **Publish Web Page** field and the **Based on Source File** field in the Web Publishing Wizard dialog are read-only and contain the text "(Display Name).htm" and "(All [GraphWorX, AlarmWorX, or TrendWorX] Displays in Project)," respectively. The browse (**…**) button is also disabled.



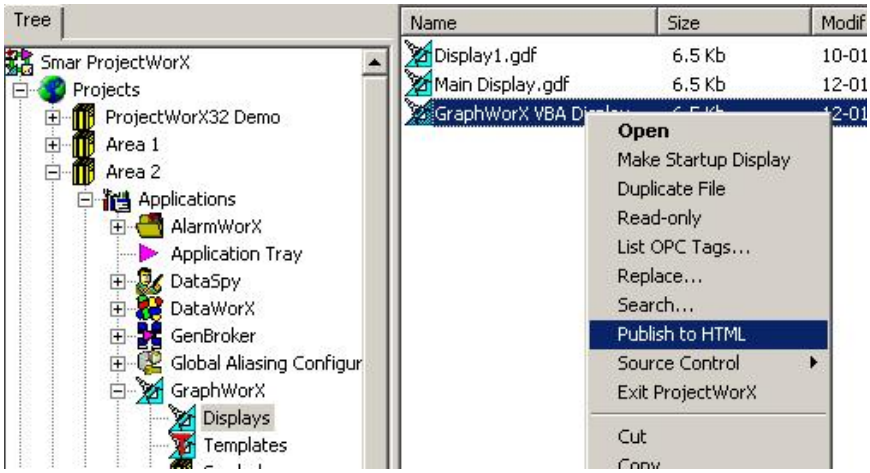
Choosing a File Type to Publish

- Right-click on the **GraphWorX/Displays** (or the **AlarmWorX/Alarm Container** tree or the **TrendWorX/Trend Container**) tree and select **Publish All Displays,** as shown in the figure below. In this case, both the **Publish Web Page** field and the **Based on Source File** field in the Web Publishing Wizard dialog are read-only and contain the text "(Display Name).htm" and "(All [GraphWorX, AlarmWorX, or TrendWorX] Displays in Project)," respectively. The browse (**…**) button is also disabled.



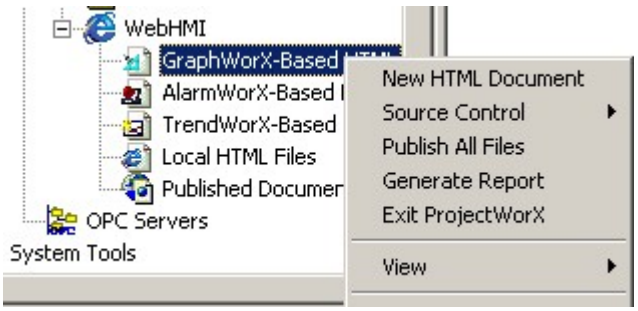
Publishing All Displays in a Project

- Right-click on a GraphWorX (.gdf), AlarmWorX (.a32), or TrendWorX (.t32) file and select **Publish to HTML,** as shown in the figure below. In this case, the **Based on Source File** field in the Web Publishing Wizard dialog is read-only and contains the name of the selected display file. The browse (**…**) button is also disabled.



Publishing a Display File

- Right-click on the **Applications/WebHMI/GraphWorX-Based HTML** (or **AlarmWorX-Based HTML** or **TrendWorX-Based HTML)** tree and select **New HTML Document,** as shown in the figure below. In this case, you need to specify a GraphWorX display file in the **Based on Source File** field by browsing for the file or by typing in the file name. You also need to specify the name of the new HTML file in the **Publish Web Page** field.



Creating a New HTML File in a Project

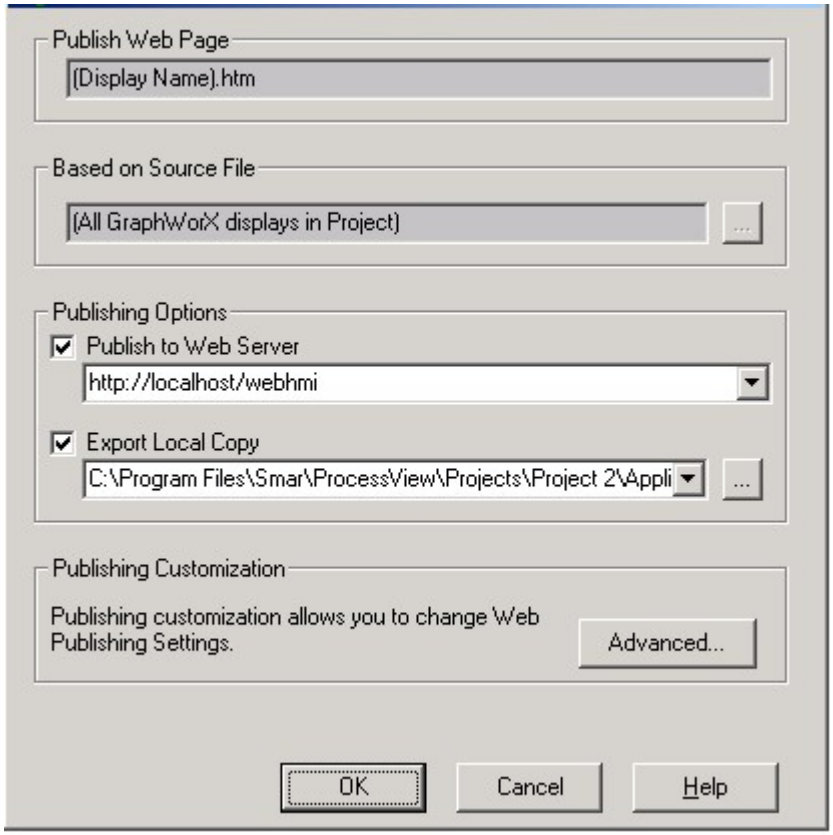
Export and Publish Options in ProjectWorX

The Web Publishing Wizard in the ProjectWorX console, shown in the figure below, generates an HTML file based on one or more user-specified GraphWorX display (.gdf) files, AlarmWorX container (.a32) files, and TrendWorX container (.t32) files. Then the Wizard either "exports" (saves) the HTML file to a user-specified directory on the local drive or "publishes" (uploads) the HTML file to a user-specified Web server URL address (i.e. over the Internet or an intranet).

You have the following options when using the Web Publishing Wizard for a project:

- Export and/or publish all files in the project.
- Export and/or publish a single file in the project.
- Export a file locally.
- Publish a file to a Web server.

NOTE
Both the Publish to Web Server and Export Local Copy actions can be performed at the same time.



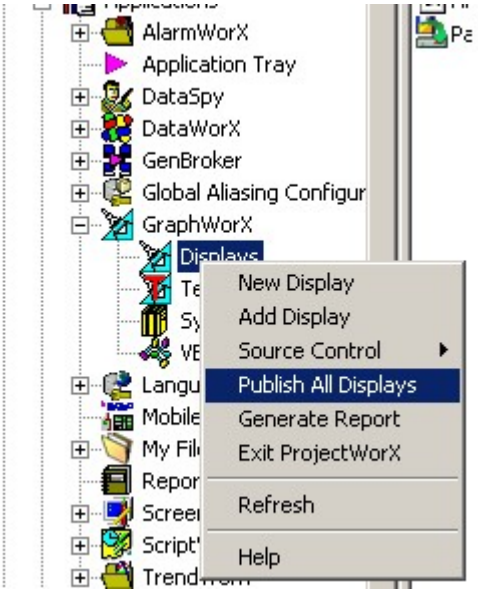
Web Publishing Wizard in ProjectWorX Console

Exporting and Publishing Multiple Display Files in ProjectWorX

In ProjectWorX, you can export and/or publish multiple files using the Web Publishing Wizard.

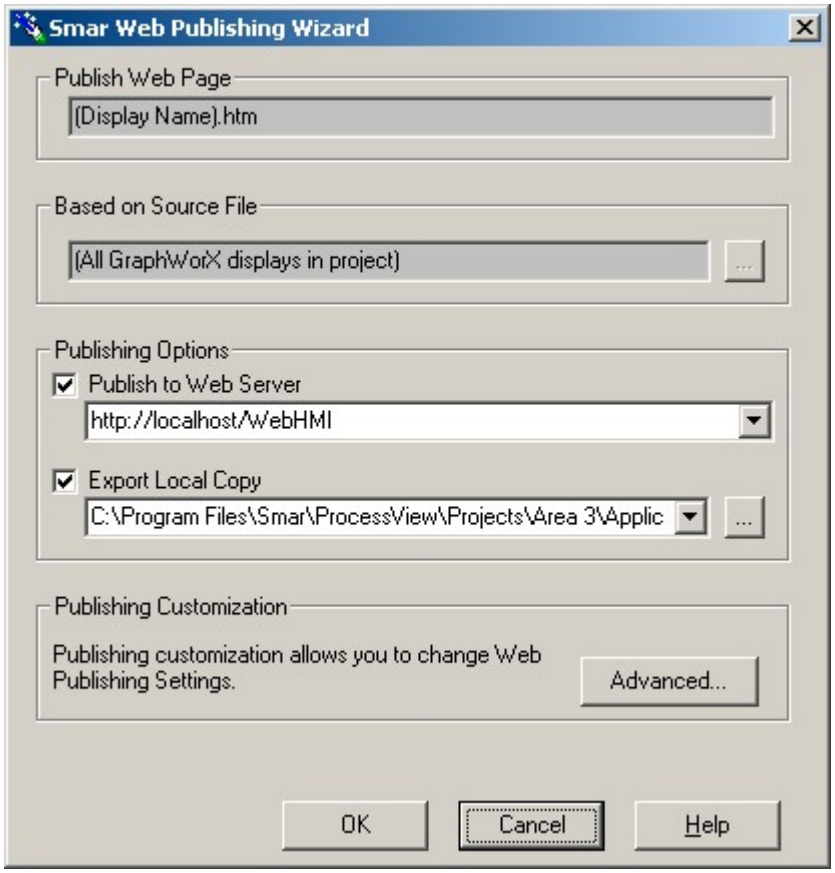
To export/publish all displays in a project:

1. Select the project root and then choose **Publish Wizard** from the **Tools** menu, or right-click on the **Applications/GraphWorX/Displays** tree (or the **AlarmWorX/Alarm Container** tree or the **TrendWorX/Trend Container**) and select **Publish All Displays,** as shown in the figure below.



Launching the Web Publishing Wizard

2. This launches the Web Publishing Wizard, as shown in the figure below. In this case, both the **Publish Web Page** field and the **Based on Source File** field in the Web Publishing Wizard dialog are read-only and contain the text "(Display Name).htm" and "(All [GraphWorX, AlarmWorX, or TrendWorX] Displays in Project)," respectively. The browse (**...**) button is also disabled.



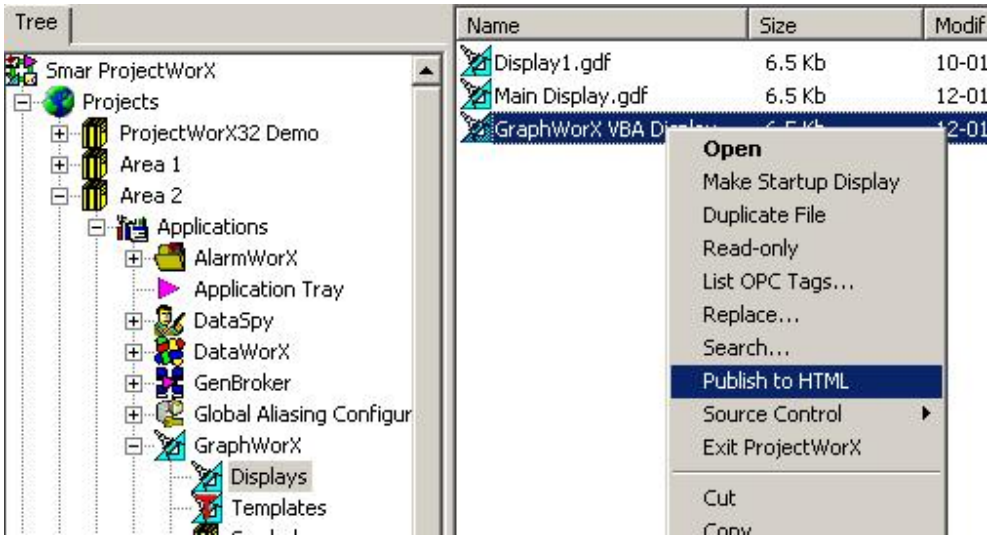
Publishing All Displays in a Project

Exporting and Publishing Individual Display Files in ProjectWorX

In ProjectWorX, you can export and/or publish individual files using the Web Publishing Wizard.

To export/publish a single display in a project:

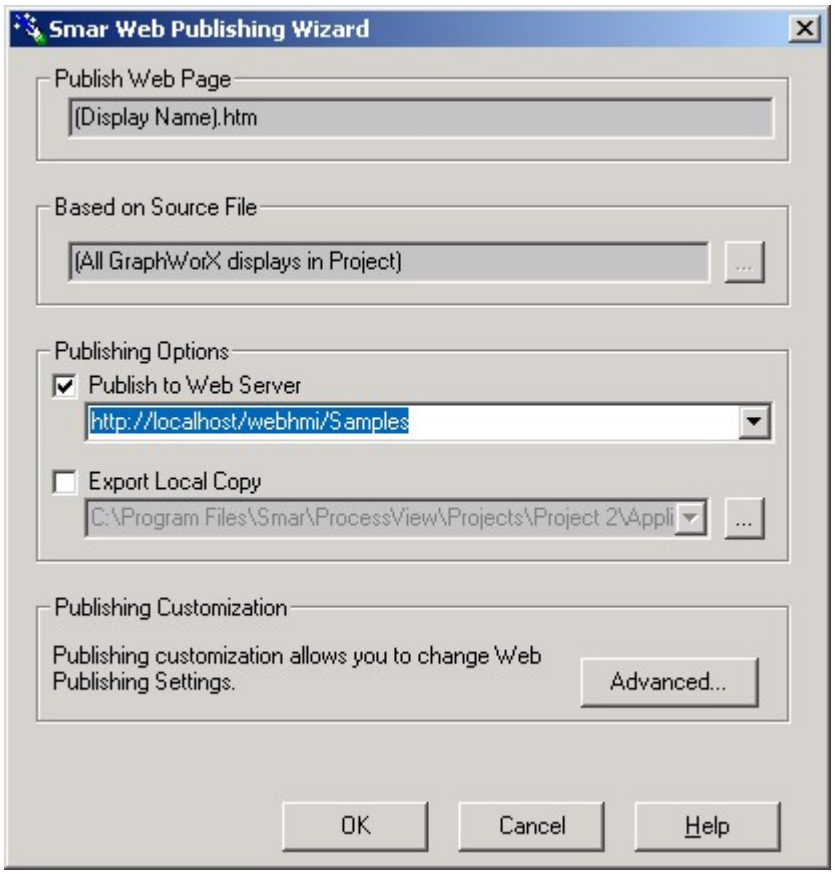
1. Right-click on a GraphWorX (.gdf) file, an AlarmWorX container (.a32) file, or a TrendWorX container (.t32) file and select **Publish to HTML,** as shown in the figure below.



Launching the Web Publishing Wizard

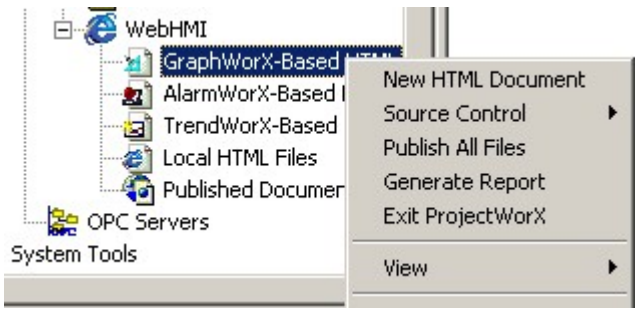
2. This launches the Web Publishing Wizard, as shown in the figure below. In this case, the **Based on Source File** field in the Web Publishing Wizard dialog is read-only and contains the name of the selected display file. The browse (**...**) button is also disabled.

3. In the **Publish Web Page** field of the Web Publishing Wizard, specify the name of the HTML file that will be created. The file name is filled in by default, but you can give the HTML file a different name.



Publishing a Display in a Project

NOTE
You can also right-click on the **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) and select **New HTML Document,** as shown in the figure below, to export/publish a display. This launches the Web Publishing Wizard. In this case, you need to specify a display file in the **Based on Source File** field by browsing for the file or by typing in the file name. You also need to specify the name of the new HTML file in the **Publish Web Page** field.

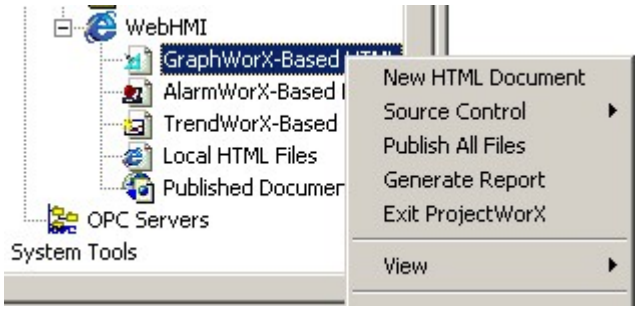


Creating a New HTML File in a Project

Exporting a Display File Locally in ProjectWorX

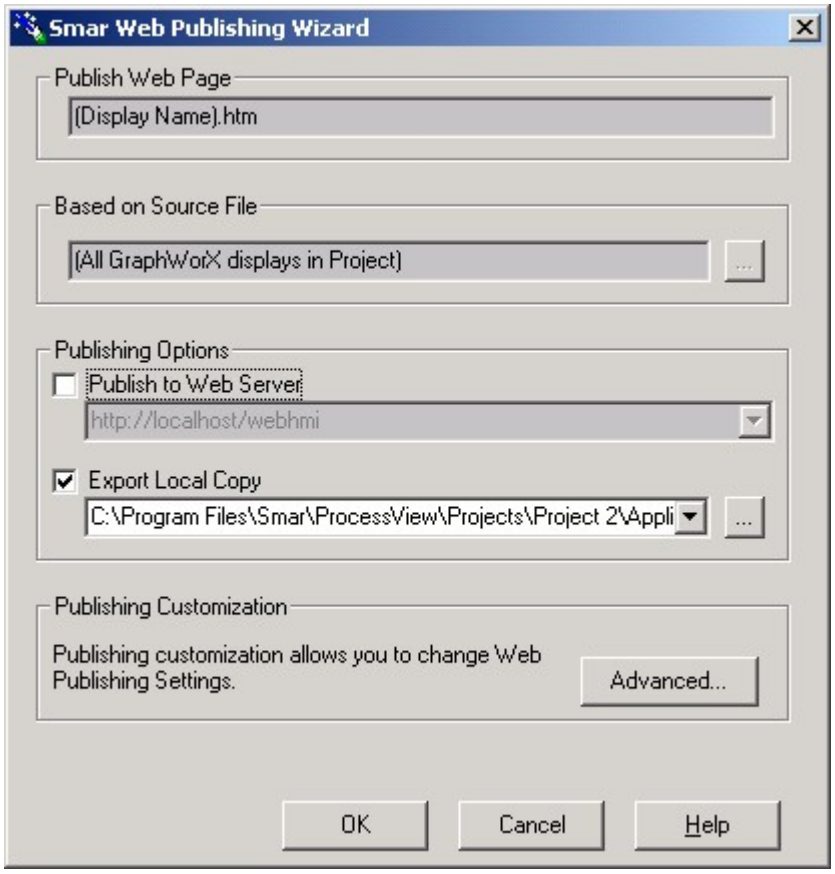
To export a display file to a directory on the local drive:

1. Right-click on the **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) and select **New HTML Document,** as shown in the figure below.



Launching the Web Publishing Wizard

2. This launches the Web Publishing Wizard, as shown in the figure below. In the **Based on Source File** field of the Web Publishing Wizard, you must specify the name of the display file to be exported, as shown in the figure below. To choose a display, click the **...** button to the right to browse for a file. Select a file and then click **Open.** The directory path and the file name are shown in the text field.



Exporting a Display File Locally in ProjectWorX

3. In the **Publish Web Page** field of the Web Publishing Wizard, specify the name of the HTML file that will be created.

4. In the **Publishing Options** field, the **Export Local Copy** check box is checked by default. Specify the local directory path name to which you want to export the HTML file. You can select a recently used path from the drop-down list, or click the **…** button to browse for a destination directory. Select the directory and click **OK.** The local directory pathway you selected appears in the **Export Local Copy** field of the Web Publishing Wizard.

Note: By default, ProjectWorX saves the HTML file to the (local) Applications/WebHMI/GraphWorX-Based HTML tree (or the AlarmWorX-Based HTML tree or the TrendWorX-Based HTML tree). From there, the HTML file can be edited and published again in the future.

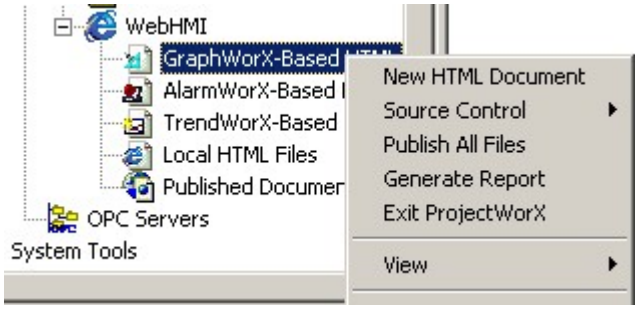
5. Click the **OK** button to generate the HTML file. The new HTML file is saved to the local directory pathway specified in the **Export Local Copy** field.

NOTE
Both the Publish to Web Server and Export Local Copy actions can be performed at the same time.

Publishing a Display File to a Web Server in ProjectWorX

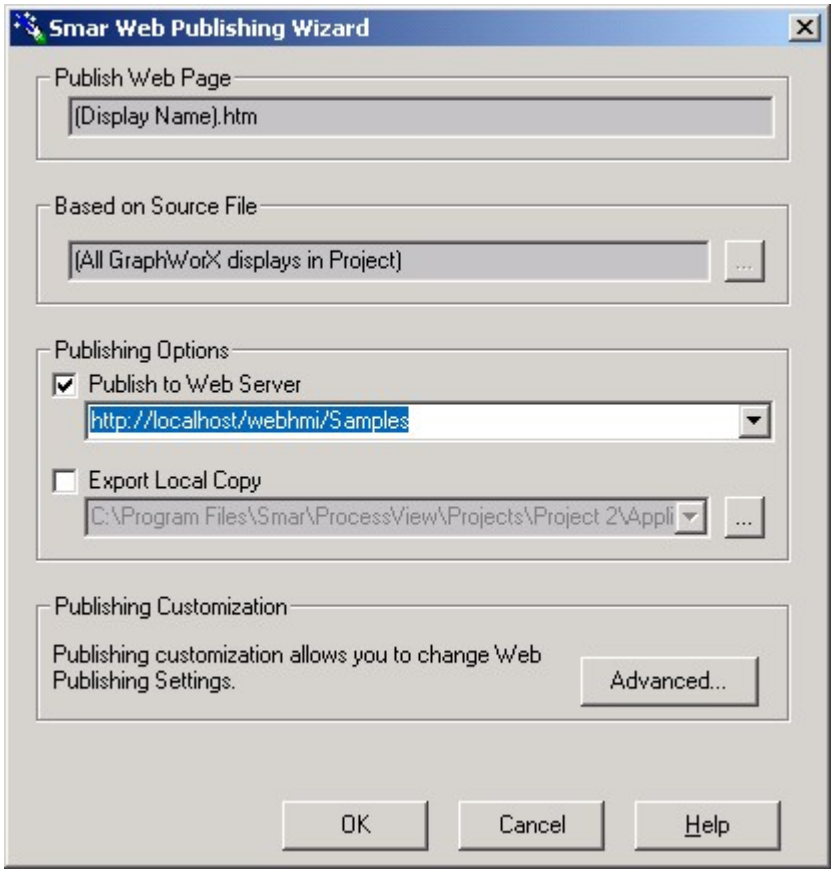
To publish the HTML file to a directory on a Web server (i.e. over the Internet or an intranet):

1. Right-click on the **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) and select **New HTML Document,** as shown in the figure below.



Launching the Web Publishing Wizard

2. This launches the Web Publishing Wizard, as shown in the figure below. In the **Based on Source File** field of the Web Publishing Wizard, you must specify the name of the file to be published, as shown in the figure below. To choose a display, click the **…** button to the right to browse for a file. Select a file and then click **Open.** The directory path and the file name are shown in the text field.



Publishing a Display File to a Web Server

3. In the **Publish Web Page** field of the Web Publishing Wizard, specify the name of the HTML file that will be created.

4. In the **Publishing Options** field, check the **Publish to Web Server** check box and type in the URL address of your Web server with the complete directory indicating where you want to publish the HTML file, as shown in the figure above. In the sample Web server URL address shown above ("http://www.myserver.com/WebHMI/Samples"), the various components are:

- **http://www.myserver.com:** IP address (server name) of the WebHMI Server
- **WebHMI:** Name of the WebHMI server root directory
- **Samples:** Name of the directory on the server to which the HTML file will be saved

5. Click the **OK** button to generate the HTML file. The new HTML file is uploaded to the Web server and then saved to the URL address path specified in the **Publish to Web Server** field.

NOTES
By default, ProjectWorX also saves the HTML file to the (local) **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree). From there, the HTML file can be edited and published again in the future. Both the **Publish to Web Server** and **Export Local Copy** actions can be performed at the same time.

Publishing Customization Options

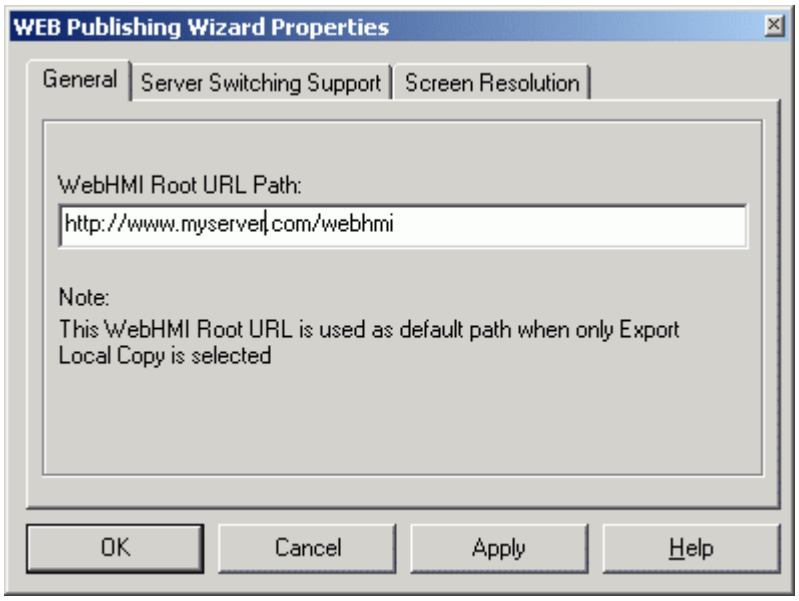
The Web Publishing Wizard contains some customization options for exporting/publishing HTML files. Clicking the **Advanced** button on the Web Publishing Wizard dialog opens the **Web Publishing Properties** dialog box, which contains the following tabs:

- General Settings
- Server Switching Support
- Screen Resolution Settings

- Publishing Options
- Publishing Channel

General Settings

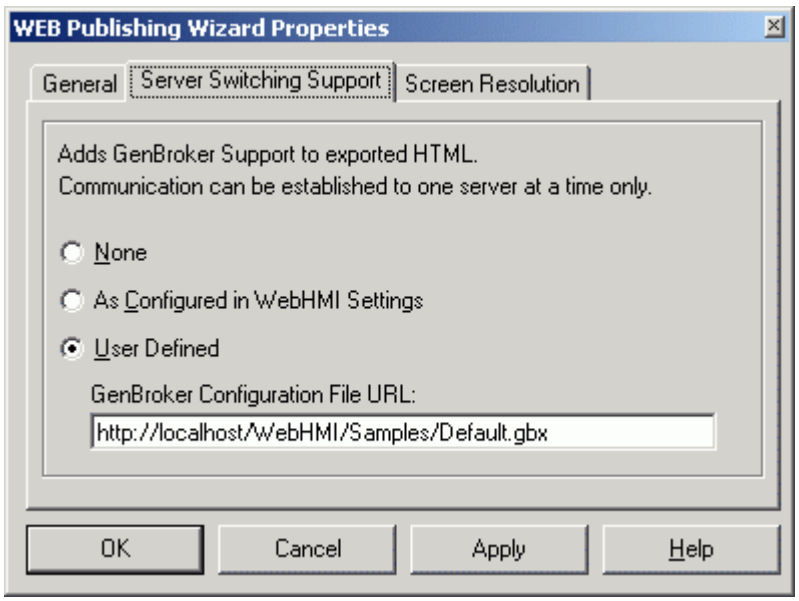
The **General** tab of the **Web Publishing Properties** dialog box, shown in the figure below, allows you to specify the default URL address for the WebHMI Server. The **General** tab is visible only when **Export Local Copy** is the sole option selected on the Web Publishing Wizard dialog box. If **Publish to Web Server** is selected on the Web Publishing Wizard dialog box, then the **General** tab is hidden and you won't need to configure it.



General Settings

Server Switching Support

The **Server Switching Support** tab of the **Web Publishing Properties** dialog box, shown in the figure below, allows you to enable or disable GenBroker support for the exported/published HTML file. Here you can specify which GenBroker configuration file (.gbx) will be activated. The GenBroker configuration file establishes the settings for OPC data communications between the clients and the Web server.



Server Switching Support Settings

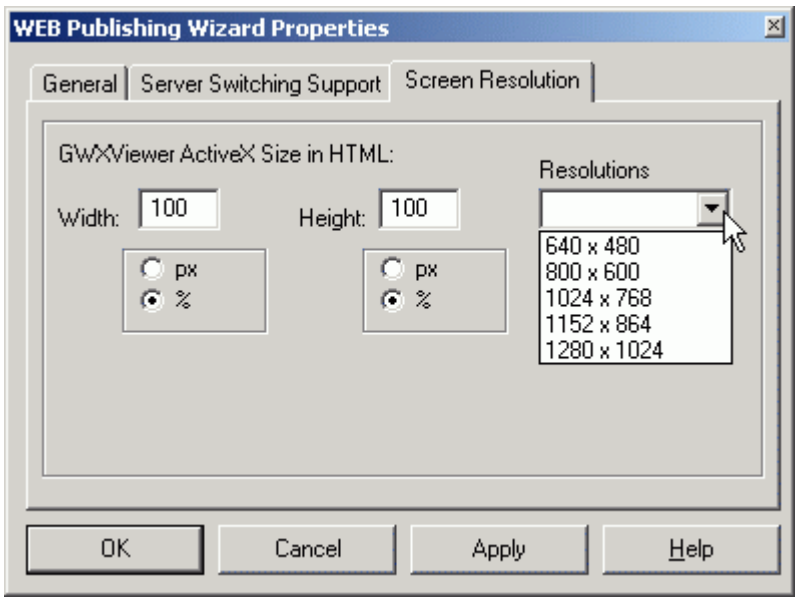
There are three available options for GenBroker support:

- **None:** GenBroker support is disabled. If this option is selected, all the communication will default to the local node. This option should be checked when the Web pages are meant to be used only from the local node. If this option is checked, Web pages may not work on a remote node, unless the remote node has ProcessView installed and GenBroker is properly configured to communicate with the WebHMI server.
- **As Configured in WebHMI Settings:** This setting uses the default URL address of the GenBroker configuration (.gbx) file as specified in the WebHMI installation. This is the recommended option for non-expert users.
- **User Defined:** When this option is selected, the **GenBroker Configuration File URL** field becomes available, allowing you to specify the URL address of the GenBroker configuration (.gbx) file. This option gives the maximum flexibility and should be used by expert users only.

NOTE
For information about configuring GenBroker settings, please see the GenBroker Configurator Help documentation.

Screen Resolution Settings

The **Screen Resolution** tab of the **Web Publishing Properties** dialog box, shown in the figure below, determines the screen resolution and size of the GraphWorX Viewer ActiveX control, which is referenced in the generated HTML file and then downloaded to a client PC when the HTML file is viewed in the client's Web browser. You can specify the screen size in the **Width** and **Height** fields in terms of pixels (px) or percentage (%). Click the **Resolutions** button to select from a list of standard screen resolutions, as shown in the figure below.

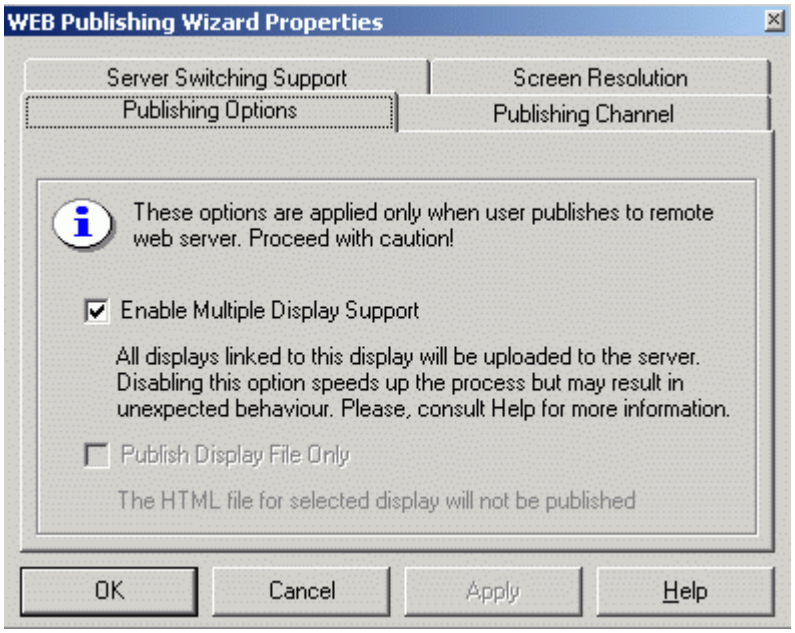


Screen Resolution Settings

Publishing Options

The **Publishing Options** tab of the **Web Publishing Properties** dialog box, shown in the figure below, enhances the publishing process. By default, the Web Publishing Wizard provides support for related files detection (for more details, see the **Multiple Display Support** section). The multiple display detection could be a rather lengthy process. You can speed up the process by disabling the **Enable Multiple Display Support** option. This is especially useful, if you have already published your project files to the Web server, and now you want to update display you have changed.

The multiple display detection mechanism ensures that the Web page will be published properly for the source file. Disabling the **Multiple Display Support** may cause publishing of an incomplete web page, which may result in unexpected behavior. Therefore, it is suggested to disallow publishing of the Web page. You can do so by enabling the **Publish Display File Only** option.



Publishing Options

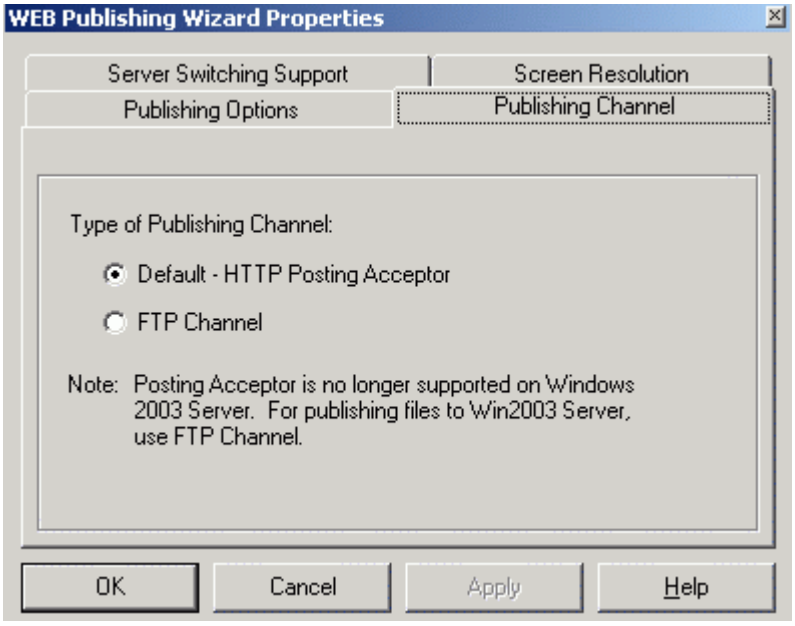
Publishing Channel

Because publishing via Microsoft Posting Acceptor is no longer supported on Windows Server 2003, we were forced to find another way of transporting published files from a ProcessView development machine to a WebHMI server. It appeared that FTP would be the best choice.

Changing the Communication Channel

By default, the method that uses Posting Acceptor services is used for publishing files to a Web server. The **Publishing Channel** tab of the **Web Publishing Properties** dialog box, shown in the figure below, enables you to change the way that files are uploaded to the Web server by selecting **FTP Channel.** This tells the Web Publishing Wizard to use FTP communications for uploading files instead of Posting Acceptor.

NOTE
Selecting **FTP Channel** does not affect the configuration of the main Web Publishing Wizard dialog; the settings are the same if you were publishing files using the default method (i.e. Posting Acceptor).

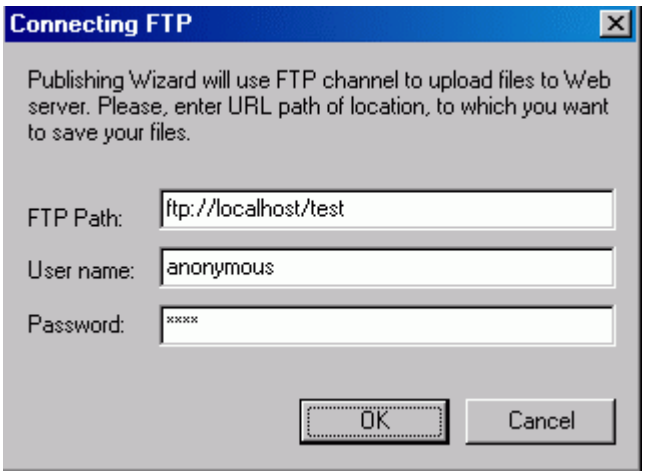


Publishing Channel

Configuring FTP Access

Just before uploading files to the Web server, you will be prompted to specify the FTP connection settings, as shown in the figure below. Enter the correct FTP path, user name and password.

NOTE
For information about FTP site configuration, please see the application note called "Publishing to Windows 2003 Server," which is located on the ProcessView CD.



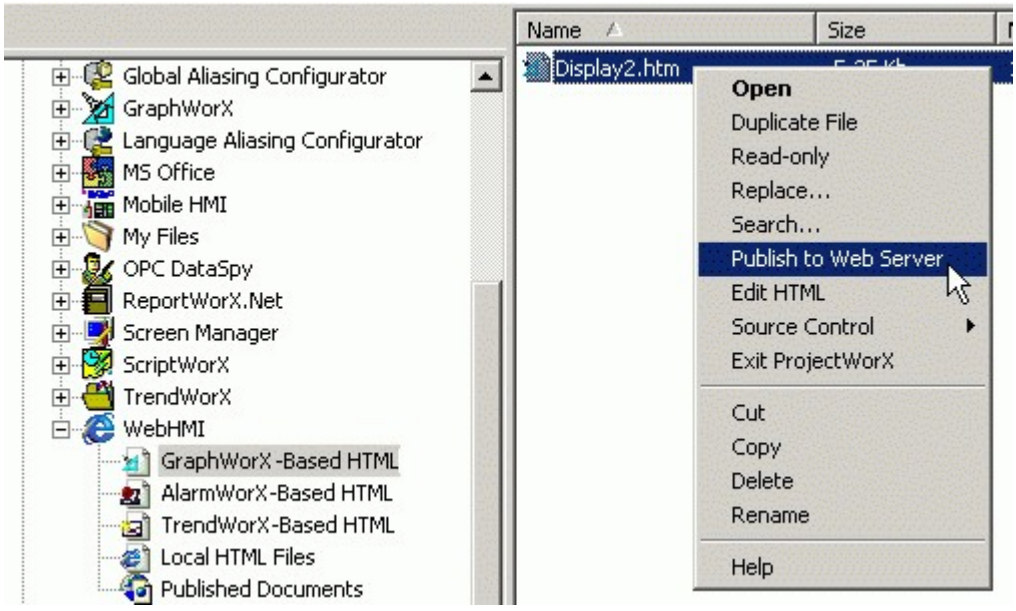
Uploading Files Via FTP

Publishing Files at a Later Time

The Web Publishing Wizard, ProjectWorX saves the generated HTML file to the (local) **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree). The advantage of storing a local copy of an exported HTML file is that it can be edited, packed, moved, unpacked, and then published again at any time. This saves you the burden of having to re-export the same file to a new HTML file. You can use this option in any of the following ways:

- Right-click on any HTML file in the **Applications/WebHMI/GraphWorX-Based HTML** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) and select **Publish to Web Server** from the pop-up menu, as shown in the figure below.
- Right-click on any HTML file in the **Applications/WebHMI/Local HTML Files** tree and select **Publish to Web Server** from the pop-up menu.

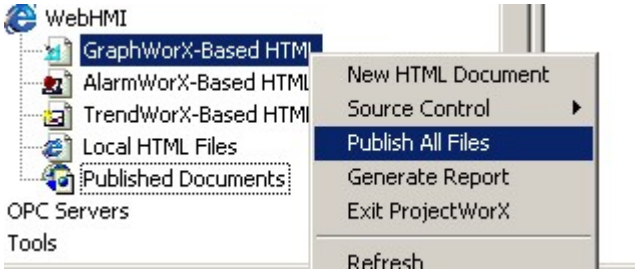
NOTE
Selecting Edit HTML from the pop-up menu opens the HTML file in the default HTML editor.



Publishing a Locally Stored HTML File

- Right-click on the **GraphWorX-Based HTML Files** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) and select **Publish All Files** from the pop-up menu, as shown in the figure below.

- Right-click on the **Local HTML Files** tree and select **Publish All Files** from the pop-up menu.
- Right-click on the **WebHMI** tree and select **Publish All Files** from the pop-up menu. This publishes all HTML files in the WebHMI tree.



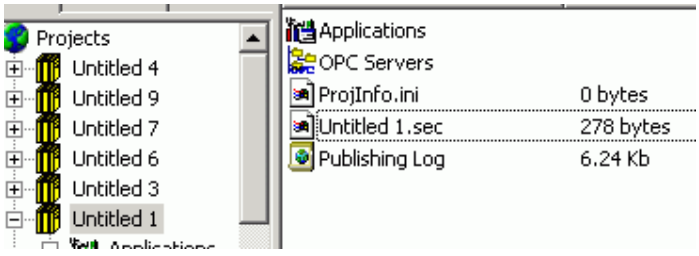
Publishing All Locally Stored HTML Files

All of these actions open the **Publish HTML File to Web Site** dialog box, as shown in the figure below. The **Qualified WWW Folder** field in this dialog is identical to the **Publish to Web Server** field in the Web Publishing Wizard dialog and is stored in the same place in the registry if the action is successful. This specifies the location of the Web server to which the HTML file will be published. If the export/publish action is successful, a "publish" action on an HTML file in the **Local HTML Files** tree simply uploads the HTML file to the Web server. A "publish" action on an HTML file in the **GraphWorX-Based HTML Files** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree) uploads both the HTML file and its attached display file to the Web server.

Specifying a Web Server Location for HTML Publishing

Web Publishing Log

When exporting/publishing only one file from a display to HTML, you are alerted if anything goes wrong in the process. If, however, multiple files are being exported/published simultaneously, a log is generated so the operation will not be halted with each file that cannot be exported/published. After a batch publishing operation from the **GraphWorX-Based HTML Files** tree (or the **AlarmWorX-Based HTML** tree or the **TrendWorX-Based HTML** tree), a log file appears showing the success or failure of each attempt to publish the files. If this log file is needed at a later time, it can be found in the project root, as shown in the figure below.



Location of Web Publishing Log File